

JK Cement LTD.

CIN : L17229UP1994PLC017199

ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018 | ISO 50001:2018 CERTIFIED COMPANY

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J.K. Cement Works
Kailash Nagar - 312617, Nimbahera
Distt. Chittorgarh (Raj.) INDIA

NBH/PC- 14/C13

Regd.AD.

Date: 28.05.2021

To,
The Director (M),
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhavan,
JOR Bagh Road, Aliganj,
New Delhi-110003

Sub: Environmental Clearance Compliance report of Karunda Limestone Mine by J.K Cement Works, Nimbahera, Dist. Chittorgarh (Rajasthan).

Ref.: EC letter no. - J-11O15/428/2008-IA.II (M) Dated 06 August 2010.

Dear Sir,

Kindly refer to the above subject matter and refer EC letter no., please find attached herewith compliance report of EC for the period of **October'2020 to March'2021**.

As per MoEF & CC notification no. S.O. 5845 (E) 26.11.2018 the soft copy of same has been sent through email to roc.z.lko-mef@nic.in, moef@nic.in, m_env@rediffmail.com, ccb.cpcb@nic.in, member-secretary@rpcb.nic.in, cpcb.bhopal@gmail.com, monitoring-ec@nic.in.

We hope that the compliance is in order.

Thanking you.

Yours Faithfully
For J.K. Cement Works, Nimbahera

Anil Kumar Jain
Sr. General Manager- Environment

Enclosed: as above

Copy to:

- 1.The Director**,Ministry of Environment, Forests & Climate Change,Regional office (Central Region), Kendriya Bhawan, 5th Floor, Sector 'H' , Aliganj, lucknow-226020 (U.P.)
- 2.The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, Shahdara- Behind Karkarduma high court New Delhi-11032
- 3. The Member Secretary**,Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, Jaipur - 302004 (RAJASTHAN)



Corporate & Registered Office : Kamla Tower, Kanpur-208001, (U. P.) INDIA
Phone : +91-512-2371478 to 81 Fax : 2399854 E-mail : ho.grey@jkcement.com

J. K. Cement Works, Nimbahera
J. K. Cement Works Mangrol
J. K. Cement Works, Gotan
J. K. Cement Works, Jharli

J. K. Power, Bamania
J. K. Cement Works, Muddapur
J. K. White Cement Works, Gotan
J. K. White, Katni





HALF YEARLY COMPLIANCE REPORT
OF
ENVIRONMENTAL CLEARANCE LETTER NO.
J-11015/428/2008-IA.II (M) dated 06.08.2010
Period: October-2020 to March-2021

For
Karunda Limestone Mine
Production Limestone: 1.09 MMTPA to 2.0 MMTPA

Submitted to:
MoEF&CC, New Delhi & Central Regional Office, Lucknow (UP)
Central Pollution Control Board, New Delhi & Bhopal
Rajasthan State Pollution Control Board, Jaipur


Submitted by:
M/s J. K. CEMENT WORKS, NIMBAHERA,
Kailash Nagar, Tehsil: Nimbahera, District: Chittorgarh (Raj)



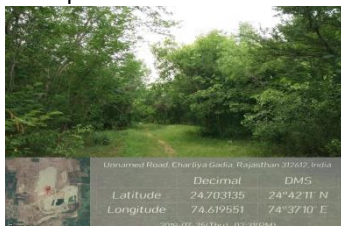






JK SUPER
CEMENT
BUILD SAFE

PROPONENT:	J.K. CEMENT WORKS, NIMBAHERA (RAJ.)	Period from
PROJECT:	Expansion of Karunda Lime Stone Mine (M.L. No.-9/79 & Renewal-3/03)- Limestone -1.09 MTPA to 2.0MTPA, Village – Karunda, Tehsil- Nimbahera, District- Chittorgarh, Rajasthan.	October' 2020 to March' 2021
Environment Clearance issued from MOEF, IA Division, New Delhi vide letter No. J-11015/428/2008-IA.II (M) dated 06.08.2010		
S.No.	Condition	Status
	(A) Specific Conditions	
(i)	The project proponent shall obtain Consent to Establish and Consent to Operate from the Rajasthan State Pollution Control Board and effectively implement all the conditions stipulated therein.	<p>Complied with.</p> <p>Consent to Establish has been obtained under Air & Water Act for the expansion in production capacity of 2.0MMTPA vide letter no. F(Mines)/Chittorgarh(Nimbahera)/513(1)/2010-2011/6708-6712 dated 27/01/2011.</p> <p>Renewal of Consent to operate has been obtained under Air & Water act for expansion in production capacity of Limestone - 2.0 MMTPA vide letter no. F(Mines)/Chittorgarh (Nimbahera)/1869(1)/2017-2018/ 2141 - 2145 dated. 20.06.2017 valid till 31/05/2022.</p>
(ii)	Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India in Contempt Petition (C) No.412/2004 in IA No. 833 in Writ Petition (C) No. 202 of 1995, as may be applicable to this project.	Will be complied.
(iii)	The environmental clearance is subject to approval of the State Land use Department, Government of Rajasthan for diversion of agricultural land for non-agricultural use.	<p>Complying with.</p> <p>The mining lease was originally sanctioned in favor of J. K. Cement Works by State Govt. vide letter no. P5 (32) KHAN/ Group – 03/ 80 dated 25.07.1984 for an area of 336.70 Ha. The company has surrendered an area of 95.84 ha. out of 336.70 ha. and was accepted by Superintending Mining Engineer, Bhilwara vide letter no. SME/ BHIL CIRCLE/ CC1/ ML 3/ 03/ 1509 dated 16.07.2008 and retained only an area of 240.86Ha.</p> <p>The Mining lease has been renewed first time vide State Govt. order no. P.16 (19) Khan/Group-2/05 dated 18.11.2010 for a period of 20 years for an area of 240.86 ha. Lease agreement signed on 05.08.2014 and registered on 06.08.2014.</p>
(iv)	Necessary prior permission from the Competent Authority as may be applicable for use of grazing land for mining purpose shall be obtained.	<p>Complying with.</p> <p>The mining lease was originally granted on dated 25.07.1984 & executed on 13.12.1984 for an area of 336.70 Ha. The company has surrendered an area of 95.84 ha. out of 336.70 ha. and retained only an area of 240.86 Ha. consisting of 59.80Ha of grazing land. The orders of Hon'ble Supreme Court 2006, is not applicable as the lease was allocated prior to 2006.</p> <p>Out of 240.86 Ha ML area, the total land acquired till date is 209.98Ha. including 38.53 Ha. Charnot land. The balance Charnot land is 21.27 Ha to be acquired.</p> <p>Permission for working in Grazing land has been granted by District Authorities vide District Collectors letter No. Rajasva/Khanan/NOC/12-12(66)07/199 dated 2nd Jan/Feb.2012, Rajasva/Khanan/NOC/12-12(66)07/228 dated 6th Feb. 2012 and vide Prakaran No. 5/96 dated 27.03.1996.</p>

(v)	The project proponent shall develop fodder plots in the non-mineralized area in lieu of use of grazing land.	<p>Will be complied.</p> <p>The mining lease was executed on 13.12.1984. Land use pattern at the CP stage is given below: -</p> <table><tr><th>SN</th><th>Description</th><th>Area, ha</th></tr><tr><td>1</td><td>Pit Area</td><td>156.706 (water body)</td></tr><tr><td>2</td><td>OB Dump</td><td>6.677 (Plantation)</td></tr><tr><td>3</td><td>Infrastructure (Office, crusher & workshop etc.)</td><td>2.42 Re-grassing for growth of fodder/ flora/ fauna in compliance of MOEF&CC OM dated 16th January 2020.</td></tr><tr><td>4</td><td>Embankment</td><td>0.459 (Plantation)</td></tr><tr><td>4</td><td>Public road existing before grant of lease</td><td>1.17</td></tr><tr><td>5</td><td>Plantation (within lease)</td><td>46.234</td></tr><tr><td>6</td><td>Private Agriculture land</td><td>2.153</td></tr><tr><td>7</td><td>Grazing land</td><td>25.041</td></tr><tr><td></td><td>Total</td><td>240.86</td></tr></table>	SN	Description	Area, ha	1	Pit Area	156.706 (water body)	2	OB Dump	6.677 (Plantation)	3	Infrastructure (Office, crusher & workshop etc.)	2.42 Re-grassing for growth of fodder/ flora/ fauna in compliance of MOEF&CC OM dated 16th January 2020.	4	Embankment	0.459 (Plantation)	4	Public road existing before grant of lease	1.17	5	Plantation (within lease)	46.234	6	Private Agriculture land	2.153	7	Grazing land	25.041		Total	240.86						
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(vi)	The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.	<p>Complying with.</p> <p>The detail of the elevation, ground water table and working level is given below:-</p> <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>436</td><td>--</td></tr><tr><td>2.</td><td>Lowest Elevation</td><td>429</td><td>--</td></tr><tr><td>3.</td><td>General Ground Level</td><td>432</td><td>--</td></tr><tr><td>4.</td><td>Water Table (Pre-Monsoon)</td><td>382-377</td><td>50-55</td></tr><tr><td>5.</td><td>Water Table (Post-Monsoon)</td><td>392-387</td><td>40-45</td></tr><tr><td>6.</td><td>First Year Working</td><td>400</td><td>32</td></tr><tr><td>7.</td><td>Fifth Year Working Level</td><td>384</td><td>48</td></tr><tr><td>8.</td><td>Ultimate Pit Limit</td><td>384</td><td>48</td></tr></table> <p>Hence water table will be intersected in year 2022-23 (Post monsoon season). However, NOC for ground water withdrawal has been obtained from CGWA vide letter no. 21-4(286)/WR/CGWA/2008-1676 dated 28.10.2015. Permission from CGWA for dewatering the mine seepage on account of mining the water table has been obtained from the Office of Central Ground Water Authority, Ministry of Water Resources, River Development & Ganga Rejuvenation vide letter no. 21-4(286)/WR/CGWA/2008-813 dated 17.05.2016. Applied for renewal vide letter No. MGR-PC-23/2562 dated 16.10.2017. Renewal application has been recommended by the Regional Director CGWB Jaipur to the Member Secretary CGWA New Delhi vide letter No. TS/ 21B (221)/ CGWA/ WR/2008-6073 dated 18/07/2018. Revise Renewal application as per CGWA Guidelines 24 September 2020 has been submitted on 10.01.2021.</p>	S. No.	Particulars	Levels (MSL)	BGL (m)	1.	Highest Elevation	436	--	2.	Lowest Elevation	429	--	3.	General Ground Level	432	--	4.	Water Table (Pre-Monsoon)	382-377	50-55	5.	Water Table (Post-Monsoon)	392-387	40-45	6.	First Year Working	400	32	7.	Fifth Year Working Level	384	48	8.	Ultimate Pit Limit	384	48
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(vii)	The Project Proponent shall ensure that no natural watercourse and/or water resources are obstructed due to any mining operation. Adequate measures shall be taken for protection of the seasonal nallah passing through the mine lease and also the murlia dam reported adjacent to mine lease (0.1KM) during the course of mining operation.	<p>Complying with.</p> <p>No natural water course and / or water resources will be obstructed due to any mining operation.</p> <p>In Karunda Mining lease area, there exists a nallah in South side flowing in South direction from SW to SE direction meeting the catchment area of the earthen dam. This nallah is only a seasonal nallah and is not a perennial one.</p> <p>This area is already deducted from the active mine working and also we have put embankment all along the length of the nallah keeping a safety distance of 15 m from it in addition to safety zone of 45 m on both side all along the nallah.</p>																																				

(viii)	<p>The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.</p>	<p>Complying with.</p> <p>The Top soil generated during mining operation is being stacked at designated places and used for plantation.</p> <p>Total Top soil quantity stored till 31st March' 2021 total was 283078.0 MT is stacked within ML area at earmarked site and utilized for plantation.</p> <div></div> <p style="text-align: center;">Dense Plantation Carried Over Top Soil Spread Area At Karunda Limestone Mine of J.K. Cement Works, Nimbahera</p> <p style="text-align: center;">The Photograph showing plantation on top soil.</p>										
(ix)	<p>The waste generated during the mining operation shall be stacked at the earmarked site and reclaimed by the plantation. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office, Lucknow on six monthly basis.</p>	<p>Complying with.</p> <p>The interburden / waste (interstitial clay) generated till 31st March' 2021 total was 636166.32 MT is stacked within ML area at earmarked site occupying 2.334 ha area.</p> <p>The quantity of sub grade mineral till 31st March' 2021 total was 1278013.68 MT is stacked within ML area at earmarked site occupying 6.275 ha area.</p> <p>The last compliance report was submitted periodically to the Office of MoEF&CC Regional Office, Lucknow vide letter no. NBH/PC-14/C-13/ dated 26.11.2020.</p>										
(x)	<p>The void left unfilled in the entire excavated area of 115 ha shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body.</p> <p>Peripheral fencing shall be carried out all along the excavated area.</p>	<p>Will be complied.</p> <p>At the conceptual phase, the entire excavated area of 156.706 Ha will be converted into water reservoir. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes.</p> <p>The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body.</p> <p>Peripheral fencing shall be carried out all along the excavated area during the lease period as and when required.</p>										
(xi)	<p>Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, temporary soil, mineral dumps and waste dump(s) to arrest flow of silt and sediment directly into the agricultural fields, the Murlia dam, seasonal nallah and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after the monsoon and maintained properly.</p> <p>Garland drains, setting tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and waste dump(s) to prevent run off of water and flow of sediments directly into the agricultural fields, the Murlia dam, seasonal nallah and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and</p>	<p>Complied with.</p> <p>Rainwater collected in mine pit and transfers to non-working pit to sedimentation and then utilize for various purpose.</p> <p>To collect run off water from subgrade dump and soil stack garland drain and siltation pit has been constructed. Details are given below:</p> <table><tr><th>Catch drain / Garland drain</th><th>Dimension</th></tr><tr><td>1. West of North pit –</td><td>Length – 850 m Width – 1 m, Depth - 1.5 m</td></tr><tr><td>2. South West of South pit –</td><td>Length – 770 m Width – 1 m, Depth - 1.5 m</td></tr><tr><td>3. Around Subgrade dump in NE side of North pit near Charlia village–</td><td>Length – 721 m Width – 1 m, Depth - 1.5 m</td></tr><tr><td>4. Around Subgrade dump in South side of South pit –</td><td>Length – 183 m Width – 1 m, Depth - 1.5 m</td></tr></table> <p>Total rainfall in single day (considering 50 mm maximum rainfall)-</p> <p>1. Total rain water would be available= OB dump (area) X rainfall(m) X Runoff coefficient (20%)</p> <p>23340 M² X 0.05 M X 0.20 = 233.4 M³</p> <p>and considering 50% safety margin then total capacity of siltation pond should be 466.8 m³.</p>	Catch drain / Garland drain	Dimension	1. West of North pit –	Length – 850 m Width – 1 m, Depth - 1.5 m	2. South West of South pit –	Length – 770 m Width – 1 m, Depth - 1.5 m	3. Around Subgrade dump in NE side of North pit near Charlia village–	Length – 721 m Width – 1 m, Depth - 1.5 m	4. Around Subgrade dump in South side of South pit –	Length – 183 m Width – 1 m, Depth - 1.5 m
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	<p>maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of slit material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.</p>	<p>2. Sub grade stack (area) X rainfall (m)X Runoff coefficient (20%) 62540 X 0.05 M X 0.20 = 625.4 M3 and considering 50% safety margin then total capacity of siltation pond should be 1250.8 m3.</p> <p>Total rain water collection capacity of siltation pit requires = 466.8 + 1250.8 = 1717.6 m3</p> <p>Constructed four siltation pit with dimension as given below: -</p> <table><thead><tr><th>Sr. 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>15.5</td><td>15</td><td>2.45</td><td>569.625</td></tr><tr><td>2.</td><td>18</td><td>17</td><td>3</td><td>918</td></tr><tr><td>3.</td><td>17</td><td>17</td><td>3</td><td>867</td></tr><tr><td>4.</td><td>20</td><td>16</td><td>2.46</td><td>787.2</td></tr><tr><td colspan="4">Total</td><td>3141.825</td></tr></tbody></table> <p>The storm water is being collected to garland drain from the periphery of the pit area and the waste dump area routed to siltation pond. The collected water is being used for plantation and water sprinkling on haul road.</p>  <p>A View of Garland Drain System At Karunda Limestone Mine of J.K. Cement Works, Nimbahera</p>	Sr. No.	Length (M)	Width (M)	Depth (M)	Capacity M3)	1	15.5	15	2.45	569.625	2.	18	17	3	918	3.	17	17	3	867	4.	20	16	2.46	787.2	Total				3141.825
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(xii)	<p>Dimension of the retaining wall at the toe of the waste dumps and the waste benches within the mine to check run-off and siltation should be based on the rain fall data.</p>	<p>Complied with.</p> <p>Retaining wall at the toe of waste dump has been made with dimension of 385 m (L) X 0.6 m (W) X 2.10 m (H)</p> 																														
(xiii)	<p>Plantation shall be raised in an area of 27 ha including a 7.5m wide green belt in the safety zone around the mining lease, reclaimed area, around water body, around waste dumps along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 1000 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.</p>	<p>Complying with.</p> <ul style="list-style-type: none">➤ Total 24.5 ha. area is covered under plantation with 62350 nos. plantation (within and outside lease) done till 31st March-2021. The density of trees within lease is around 2600 plant per ha.➤ Total 7.5 m safety zone area is 4.90 ha, out of which 0.898 ha area has been planted and 2.18 ha will be completed by 31st March 2024. <div><p>Decanned Road, Chauriya Gucha, Rajasthan 320025 India DMS Latitude 24°42'35" N Longitude 74°41'55" E 2021/07/26 11:41:02:38PM</p></div> <div><p>KARUNDA LIMESTONE MINES (CHARLA SARIAN) AREA 22 PLANTATION AREA - 4 HECT DMS Latitude 24°42'35" N Longitude 74°41'55" E</p></div>																														

(xiv)	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	<p>Complied with.</p> <ul style="list-style-type: none">➤ Regular water sprinkling is done on the haul roads to prevent the dust becoming air borne during transportation movement of vehicles.➤ Ambient air quality and Noise monitoring was conducted by a NABL accredited Laboratory are enclosed as Annexure-I. 																																																
	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	<p>Complied with.</p> <ul style="list-style-type: none">• Surface rain water is collected in the lower most benches to augment Ground water resources.• Anicut and siltation pond is constructed to augment water table. <p>Photographs showing Mine pit, anicut and siltation pond are as below.</p>  																																																
(xvi)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometer during the mining operation. The periodic monitoring [(at least four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January)); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office, Lucknow, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.	<p>Complying with.</p> <ul style="list-style-type: none">➤ Ground water quality monitoring has been carried out by third party which is a NABL accredited Laboratory are enclosed as Annexure-II.➤ To augment the water resources, rain water harvesting is done and stored in lower most benches (Water reservoir).➤ Ground water level and quality report is being submitted regularly to MOEF&CC, Central Ground Water Authority and Regional Director Central Ground Water Board.➤ Online ground water level details are as below: - <table border="1"><thead><tr><th>Month</th><th>Water level (m)(avg)</th></tr></thead><tbody><tr><td>October, 20</td><td>22.21</td></tr><tr><td>November, 20</td><td>28.42</td></tr><tr><td>December, 20</td><td>30.8</td></tr><tr><td>January, 21</td><td>31.93</td></tr><tr><td>February, 21</td><td>32.48</td></tr><tr><td>March, 21</td><td>39.37</td></tr></tbody></table> <p>Ground water monitoring report are as below:-</p> <table border="1"><thead><tr><th rowspan="2">S N</th><th rowspan="2">Parameter</th><th colspan="4">Results</th></tr><tr><th>Pre-monsoon (28.05.20)</th><th>Monsoon (02.08.20)</th><th>Post Monsoon (11.11.20)</th><th>Winter (15.01.21)</th></tr></thead><tbody><tr><td>1</td><td>pH at 28 °C</td><td>7.26</td><td>7.92</td><td>7.39</td><td>7.76</td></tr><tr><td>2</td><td>Conductivity at 25° in umhos/cm</td><td>566</td><td>600</td><td>987</td><td>656</td></tr><tr><td>3</td><td>Colour in Hazen</td><td>Clear</td><td><1.0</td><td><1.0</td><td><1.0</td></tr><tr><td>4</td><td>Turbidity in N.T.U.</td><td>0.6</td><td><1.0</td><td><1.0</td><td><1.0</td></tr></tbody></table>	Month	Water level (m)(avg)	October, 20	22.21	November, 20	28.42	December, 20	30.8	January, 21	31.93	February, 21	32.48	March, 21	39.37	S N	Parameter	Results				Pre-monsoon (28.05.20)	Monsoon (02.08.20)	Post Monsoon (11.11.20)	Winter (15.01.21)	1	pH at 28 °C	7.26	7.92	7.39	7.76	2	Conductivity at 25° in umhos/cm	566	600	987	656	3	Colour in Hazen	Clear	<1.0	<1.0	<1.0	4	Turbidity in N.T.U.	0.6	<1.0	<1.0	<1.0
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March, 21	39.37																																																	
S N	Parameter	Results																																																
		Pre-monsoon (28.05.20)	Monsoon (02.08.20)	Post Monsoon (11.11.20)	Winter (15.01.21)																																													
1	pH at 28 °C	7.26	7.92	7.39	7.76																																													
2	Conductivity at 25° in umhos/cm	566	600	987	656																																													
3	Colour in Hazen	Clear	<1.0	<1.0	<1.0																																													
4	Turbidity in N.T.U.	0.6	<1.0	<1.0	<1.0																																													

		5	TDS in mg/l	340	342	584	426
		6	TSS in mg/l	40	<2.5	<2.5	3.1
		7	Total Hardness as CaCO ₃ in mg/l	264	169	322	220
		8	Calcium as Ca in mg/l	224	49	121	37
		9	Magnesium as Mg in mg/l	40	11	4.5	31.0
		10	Total alkalinity as CaCO ₃ in mg/l	240	227	378	266
		11	Chloride as Cl in mg/l	40	36	99	49
		12	Oil & Grease in mg/l	<1.4	<1.4	<1.4	1.4
		13	Fluoride as F in mg/l	0.8	0.41	0.58	0.70
		14	Iron as Fe in mg/l	<0.05	0.09	0.18	<0.05
(xvii)	Appropriate mitigative measures shall be taken to prevent pollution of the Murlia dam in consultation with the State Pollution Control Board.	Murlia dam lies at a distance of 1.2 Km in SE direction from the Karunda Mining lease and there is no adverse effect due to mining activity.					
(xviii)	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of ground water required for the project.	Complied with. NOC for drawl of groundwater from CGWA has been obtained vide letter no. 21-4(286)/WR/CGWA/2008-1676 dated. 28.10.2015 valid till October 2018 from CGWA, New Delhi. Renewal of CGWA NOC has been applied vide letter no. MGR-PC- 23/2562 dated 16/10/2017 and has been recommended and forwarded to the CGWA Delhi by the RD CGWB Jaipur vide letter no. TS/21B (221)/CGWA/WR/2008-6073 dated 18/07/2018. Revise Renewal application as per CGWA Guidelines 24 September 2020 has been submitted on 10.01.2021.					
(xix)	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.	Complying with. Rain water is harvested during rainy season in the bottom most bench.					
(xx)	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	Complied with. The maintenance of Dumpers is being regularly done by OEM under the supervision of our Maintenance staff to maintain the condition under control.					
(xxi)	Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Complying with. Controlled blasting is being practiced by use of NONEL system of initiation for keeping Charge per delay to minimum so that the ground vibrations remain within the safe permissible norms specified by DGMS.					

(xxii)	The project proponent shall take all mitigative measures during the mining operation to ensure that the buildings/structures in the nearby areas shall not be affected due to blasting.	Complying with. No secondary blasting is being done during the mining operation. Oversized boulders are broken by use of Hydraulic Rock breaker.
(xxiii)	Drills shall either be operated with dust extractors or equipped with water injection system.	Complying with. Wet drilling is being practiced. Water injection system on DTH drill has been provided which suppresses dust at its source of generation.
(xxiv)	Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Complied with. Regular water spraying by deploying water tanker is done in the Mineral handling area.
(xxv)	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and waste water generated during the mining operation.	There is no colony for Karunda mines however colony is dedication under Nimbahera plant which has Sewage Treatment Plant (500KLD).
(xxvi)	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Complying with. Regular initial medical examination and periodical medical examination is being carried out.
(xxvii)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to MOEF and its Regional Office located at Lucknow.	Complying with. Digital processing report of the entire lease area has been submitted on 02.03.2020 vide letter no. NBH/PC-14/C12/5905.
(xxviii)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	No construction labour are engaged in Mine.
(xxix)	The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e. PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on the display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its	Complying with. <ul style="list-style-type: none"> ➤ These critical parameters are measured periodically and ambient air quality and Noise monitoring by a NABL accredited Laboratory enclosed as Annexure-I. ➤ No waste water is generated during mining operation. Mines key parameter (monitored data) are being uploaded at company website on every quarter as per said notification, which can be seen at www.jkcement.com/environmental-compliance.

	compliance.	
	(B)GENERAL CONDITIONS	
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Noted. Mining is being done in accordance with Approved Review of Mining Plan.
(ii)	No change in the calendar plan including excavation, quantum of mineral limestone and waste should be made.	Noted. Mining is being done in accordance with Approved Review of Mining Plan.
(iii)	Conservation measures for protection of flora and fauna in the core and buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.	Complying with. The Wildlife conservation plan has been prepared for six nos. of the following Schedule-I species found in the buffer area during the survey: - (a.) <i>Pavocristatus</i> (Indian Peafowl), (b.) <i>Pantherapadusfusca</i> (Indian Leopard), (c.) <i>Prionailurusrubiginosus</i> (Rusty-Spotted Cat), (d.) <i>Canis lupus pallipes</i> (Indian Wolf), (e.) <i>Varanusbengalensis</i> (Indian Monitor Lizard) & (f.) <i>Gyps indicus/Gyps bengalensis</i> (Indian Vulture) Combined Wildlife Conservation Plan has been approved by the Principal Conservator of Forest, Udaipur and recommendations forwarded to the Additional Chief Conservator of Forest Jaipur for formal sanction vide letter no. f 5()forest conservation/ Principal conservator of Forest/2020-21/ 5002 dated 24.09.2020 and same proposal has been forwarded to APCCF, Jaipur on 15.10.2020 by DYCF, Jaipur. After approval of APCCF conservation plan will be implemented.
(iv)	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e., PM ₁₀) and NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Complying with. Periodical Monitoring at four stations in the core zone as well as in the buffer zone is already being done. Ambient air quality and Noise monitoring was conducted by a NABL accredited Laboratory are enclosed as Annexure-I .
(v)	Data on ambient air quality RSPM (Particulate matter with size less than 10 micron i.e., PM ₁₀) & NO _x should be regularly submitted to the Ministry of Environment and Forests including its Regional Office located at Lucknow and the State Pollution Control Board/Central Pollution Control Board once in six months.	Complying with. Ambient air quality along with compliance report is being submitted regularly on six monthly basis to the Office of MoEF&CC Regional Office, Lucknow. Last report was submitted vide letter no. NBH/PC/C-14/C-13/ dated 26.11.2020.
(vi)	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Complying with. Fugitive dust emission is being controlled by regular waterspraying arrangement.
(vii)	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	Complying with. 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.

(viii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	There is no industrial waste water is generated from the Mine.																		
(ix)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Complied. Persons engaged in drilling, dozing and loading have been provided with dust mask. VT is being provided as required under MVT rules 1966. Regular periodic check-up of workers is being carried out.																		
(x)	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Complied. A separate environmental management cell with qualified personnel is already established & has sufficient monitoring equipment in environmental laboratory.																		
(xi)	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Lucknow.	Complying with. For environment protection measures expenditure made during FY 2020-21 was Rs. 264.9 lacs as provided below. <table border="1"> <thead> <tr> <th>S. No.</th><th>Activity</th><th>Recurring Cost per Annum (Rs. In lacs)</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Pollution control expenses (Others)</td><td>0.34</td></tr> <tr> <td>2.</td><td>Pollution control expenses (Statutory)</td><td>2.66</td></tr> <tr> <td>3.</td><td>Gardening Expenses</td><td>73.0</td></tr> <tr> <td>4.</td><td>CSR Expenses</td><td>188.90</td></tr> <tr> <td colspan="2">Total (Rs.)</td><td>264.9</td></tr> </tbody> </table>	S. No.	Activity	Recurring Cost per Annum (Rs. In lacs)	1.	Pollution control expenses (Others)	0.34	2.	Pollution control expenses (Statutory)	2.66	3.	Gardening Expenses	73.0	4.	CSR Expenses	188.90	Total (Rs.)		264.9
S. No.	Activity	Recurring Cost per Annum (Rs. In lacs)																		
1.	Pollution control expenses (Others)	0.34																		
2.	Pollution control expenses (Statutory)	2.66																		
3.	Gardening Expenses	73.0																		
4.	CSR Expenses	188.90																		
Total (Rs.)		264.9																		
(xii)	The project authorities should be inform to the Regional Office located at Lucknow regarding data of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Complied																		
(xiii)	The Regional Office of this Ministry located at Lucknow shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Noted and will extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.																		
(xiv)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office located at Lucknow, the respective Zonal Office of Central Pollution Control Board the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same	Complying with. Six monthly reports are being submitted regularly to all concern offices as given in EC letter. Last Six Monthly Monitoring report sent to RO & HO, MoEF&CC Lucknow, CPCB/ RPCB vide letter no. NBH/PC-14/C13/ dated 26.11.2020. The compliance report is uploaded at company website. www.jkcement.com/environmental-compliance .																		

	periodically. It shall simultaneously be sent to the Regional office of the Ministry of Environment and Forests, Lucknow, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board.	
(xv)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad, Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied.
(xvi)	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and the Collector's Office/Tehsildar's Office for 30 days.	Complied.
(xvii)	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, Lucknow by e-mail.	Complying with. Environment statement report for FY 2019-20 has been submitted to vide letter no. NBH-PC-ESR 21/537 dated 15.09.2020.
(xviii)	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Lucknow.	Implemented & the necessary information already sent to the concerned authority.
7.	The ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection	Noted.
8.	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environmental Protection Act, 1986.	Noted.
9.	The above conditions will be enforced inter-alia, under the provisions of the	Noted.

	water (Prevention& Control of Pollution) Act, 1974, the Air(Prevention& Control of Pollution)Act,1981, the Environment (Protection) Act, 1986 and 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 of Rajasthan and any other Court of Law relating to the subject matter.	
10.	Any appeal against this environmental Clearance shall lie with the National Environmental Appellate Authority, if preferred within a period of 30days as prescribed under section 11 of the National Environment Appellate Authority Act, 1997.	Noted.

Annexure-1**J.K. Cement WORKS, NIMBAHERA (RAJ)****KARUNDA Limestone MINE****SIX MONTHLY AMBIENT AIR QUALITY & NOISE MONITORING REPORT****October'2020 to March'2021****1) AMBIENT AIR QUALITY RESULTS : (ALL VALUES IN µg/M3)****Sample duration: 24 hours
(monthly average basis)**

Month	Near Mine Office					Near Ravana Office					3 to10 Meter Distance From Drilling Operation				Near loading point			
	PM10	PM2.5	SO ₂	NO _x	CO	PM10	PM2.5	SO ₂	NO _x	CO	SPM	SO ₂	NO _x	CO	SPM	SO ₂	NO _x	CO
Oct-20	42.5	31.5	15.1	24.0	601	51.5	39.4	15.7	23.7	676	344	13.9	25.7	619	355	15.5	27.4	493
Nov-20	51.8	39.8	13.7	27.6	607	74.2	38.6	13.3	26.5	533	437	18.1	27.6	682.0	362	13.4	24.4	802
Dec-20	57.8	47.6	15.1	29.3	745	74.3	39.4	15.8	26.5	556	448	18.4	24.9	687.0	372	14.9	26.4	808
Jan-21	45.6	30.9	12.1	25.5	584	56.5	35.7	11.3	23.5	573	416	16.8	25.9	670	340	14.1	22.5	550
Feb-21	51.3	38.0	13.7	27.2	630	56.6	32.4	14.4	28.7	647	421	20.1	28.4	705	381	18.7	27.4	596
Mar-21	49.5	32.8	13.0	23.4	750	57.8	31.5	14.1	25.0	813	352	14.8	23.6	784.3	347	15.1	23.9	727
AVERAGE	49.7	36.8	13.8	26.2	653	61.8	36.2	14.1	25.6	633.0	403	17.0	26.0	691.1	360	15.3	25.3	662.5

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

Month	Near Mines Gate		Near Ravana Office	
	DAY	NIGHT	DAY	NIGHT
Oct-20	55.8	51.4	64.2	59.4
Nov-20	54.8	50.1	63.7	58.1
Dec-20	55.7	51.3	64.1	57.2
Jan-21	52.8	48.6	62.4	56.8
Feb-21	58.5	47.9	68.5	63.3
Mar-21	57.9	53.3	66.4	58.9

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1721

Date : 07.01.2021

Sample No. : MSKGL/ED/2020-21/12/01651

Sample Description : Ambient Air

Sampling Location : Near Mine Office (Karunda Mine)

Date of Sampling : 17/18.12.2020

Reference No.& Date : e-mail dtd:23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	88	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	54	TPM/MSK/ENV (AP) /01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	28.1	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.66	IS 5182 :(Part-10) :1999

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1722

Date : 07.01.2021

Sample No. : MSKGL/ED/2020-21/12/01652

Sample Description : Ambient Air

Sampling Location : Near Ravana Office (Karunda Mine)

Date of Sampling : 17/18.12.2020

Reference No.& Date : e-mail dtd:23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	78	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in µg/m ³	60	49	TPM/MSK/ENV (AP) /01/03
3	Sulphur dioxide(SO ₂) in µg/m ³	80	8.1	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	28.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	0.49	IS 5182 :(Part-10) :1999

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

Report Prepared By

For Mitra S.K. Pvt. Ltd.
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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1723

Date : 07.01.2021

Sample No. : MSKGL/ED/2020-21/12/01653

Sample Description : Ambient Air

Sampling Location : Charlia gadia Village (Karunda Mine)

Date of Sampling : 17/18.12.2020

Reference No.& Date : e-mail dtd:23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	68	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	42	TPM/MSK/ENV (AP) /01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	6.9	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	28.3	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.44	IS 5182 :(Part-10) :1999

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1724

Date : 07.01.2021

Sample No. : MSKGL/ED/2020-21/12/01654

Sample Description : Ambient Air

Sampling Location : Karunda Village (Karunda Mine)

Date of Sampling : 17/18.12.2020

Reference No.& Date : e-mail dtd:23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	76	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in µg/m ³	60	49	TPM/MSK/ENV (AP) /01/03
3	Sulphur dioxide(SO ₂) in µg/m ³	80	8.1	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	22.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	0.42	IS 5182 :(Part-10) :1999

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1735

Date : 07.01.2021

Sample No. : MSKGL/ED/2020-21/12/01665

Sample Description : Fugitive Air

Sampling Location : 3-10 Meter Distance from Drilling
Operation (Karunda Mine)

Date of Sampling : 17.12.2020

Reference No.& Date : e-mail dtd: 23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	337	IS 5182 (Part-4) - 1999
2	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	10.2	IS: 5182 (Part-2)-2001
3	Nitrogen dioxide (NO _x) in $\mu\text{g}/\text{m}^3$	25.1	IS: 5182 (Part- 6)-2006
4	Carbon monoxide(CO) in mg/m^3	0.68	IS 5182 :(Part-10) :1999

Checked By

For Mitra S.K. Pvt. Ltd.
(Authorized Signatory)

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1736

Date : 07.01.2021

Sample No. : MSKGL/ED/2020-21/12/01666

Sample Description : Fugitive Air

Sampling Location : Near Loading Point (Karunda Mine)

Date of Sampling : 17.12.2020

Reference No.& Date : e-mail dtd: 23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	310	IS 5182 (Part-4) - 1999
2	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	9.5	IS: 5182 (Part-2)-2001
3	Nitrogen dioxide (NO _x) in $\mu\text{g}/\text{m}^3$	32.4	IS: 5182 (Part- 6)-2006
4	Carbon monoxide(CO) in mg/m^3	0.51	IS 5182 :(Part-10) :1999

Checked By

For Mitra S.K. Pvt. Ltd.

(Authorized Signatory)

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1742

Date : 07.01.2021

Sample No. : MSKGL/ED/2020-21/12/01677 & 1678

Sample Description : Noise Monitoring

Reference No.& Date : e-mail dtd:23.04.2019

ANALYSIS RESULT

Sl. No.	Sampling Date	Sampling Location	Results Leq dB(A)	
			Day Time	Night Time
1.	17/18.12.2020	Near Mine Office (Karunda Mine)	58.5	40.1
2.		Near Ravana Office (Karunda Mine)	60.4	41.8
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70

Report Prepared by :

For Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2121

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00115

Sample Description : Ambient Air

Sampling Location : Near Mine Office, Karunda Mine

Date of Sampling : 04/05.02.2021

Reference No.& Date : e-mail dtd: 07.06.2018

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	61.8	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	32.5	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	6.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	24.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.57	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in $\mu\text{g}/\text{m}^3$	180	<20	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in $\mu\text{g}/\text{m}^3$	400	10.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in $\mu\text{g}/\text{m}^3$	1	<0.01	EPA-IO 3.4
9	Nickel (Ni) in ng/m^3	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m^3	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in $\mu\text{g}/\text{m}^3$	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.5	IS 5182 : Part. 12 : 2004

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

Report Prepared By:

For Mitra S. K. Pvt. Ltd.



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2122

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00116

Sample Description : Ambient Air

Sampling Location : Near Ravana Office, Karunda Mine

Date of Sampling : 04/05.02.2021

Reference No.& Date : e-mail dtd: 07.06.2018

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	73.1	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	47.8	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	21.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.63	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in $\mu\text{g}/\text{m}^3$	180	<20	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in $\mu\text{g}/\text{m}^3$	400	13.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in $\mu\text{g}/\text{m}^3$	1	<0.01	EPA-IO 3.4
9	Nickel (Ni) in ng/m^3	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m^3	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in $\mu\text{g}/\text{m}^3$	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.5	IS 5182 : Part. 12 : 2004

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

Report Prepared By:

For Mitra S. K. Pvt. Ltd.



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2123

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00117

Sample Description : Ambient Air

Sampling Location : Charlia Gadia Village, Karunda

Date of Sampling : 04/05.02.2021

Reference No.& Date : e-mail dtd: 07.06.2018

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	68.1	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	36.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	8.3	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	34.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.42	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in $\mu\text{g}/\text{m}^3$	180	<20	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in $\mu\text{g}/\text{m}^3$	400	13.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in $\mu\text{g}/\text{m}^3$	1	0.02	EPA-IO 3.4
9	Nickel (Ni) in ng/m^3	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m^3	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in $\mu\text{g}/\text{m}^3$	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.5	IS 5182 : Part. 12 : 2004

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

Report Prepared By:

For Mitra S. K. Pvt. Ltd.

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Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2124

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00118

Sample Description : Ambient Air

Sampling Location : Karunda Village, Karunda Mine

Date of Sampling : 04/05.02.2021

Reference No.& Date : e-mail dtd: 07.06.2018

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	66.2	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in µg/m ³	60	38.1	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in µg/m ³	80	6.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	30.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	0.28	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in µg/m ³	180	<20	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in µg/m ³	400	14.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in µg/m ³	1	<0.01	EPA-IO 3.4
9	Nickel (Ni) in ng/m ³	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m ³	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in µg/m ³	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m ³	1	<0.5	IS 5182 : Part. 12 : 2004

Note : Limit as per CPCB notification, New Delhi, 18th November 2009, For Ambient air Quality

Report Prepared By:

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2150

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00176

Sample Description : Fugitive Air

Sampling Location : Near Loading Point (Karunda Mine)

Date of Sampling : 06.02.2021

Reference No.& Date : e-mail dtd: 23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	401	IS 5182 (Part-4) - 1999
2	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	25.0	IS: 5182 (Part-2)-2001
3	Nitrogen dioxide (NO _x) in $\mu\text{g}/\text{m}^3$	12.0	IS: 5182 (Part- 6)-2006
4	Carbon monoxide(CO) in mg/m^3	0.55	IS 5182 :(Part-10) :1999

Checked By

For Mitra S.K. Pvt. Ltd.
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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2149

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00175

Sample Description : Fugitive Air

Sampling Location : 3-10 Meter Distance from Drilling
Operation (Karunda Mine)

Date of Sampling : 06.02.2021

Reference No.& Date : e-mail dtd: 23.04.2019

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	305	IS 5182 (Part-4) - 1999
2	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	8.3	IS: 5182 (Part-2)-2001
3	Nitrogen dioxide (NO _x) in $\mu\text{g}/\text{m}^3$	21.0	IS: 5182 (Part- 6)-2006
4	Carbon monoxide(CO) in mg/m^3	0.75	IS 5182 :(Part-10) :1999

Checked By

For Mitra S. K. Pvt. Ltd.

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2164

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00196 & 00197

Sample Description : Noise Monitoring

Reference No.& Date : e-mail dtd:23.04.2019

ANALYSIS RESULT

Sl. No.	Sampling Date	Sampling Location	Results Leq dB(A)	
			Day Time	Night Time
1.	04/05.02.2021	Near Mine Office (Karunda Mine)	59.6	38.9
2.		Near Ravana Office (Karunda Mine)	61.5	40.2
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70

Report Prepared by :

For Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :
J.K. Cement Works, Nimbahera
C/o Kailash Nagar – 312617
Nimbahera – Distt. Chittorgarh (Raj.)

Reference No.& Date : e-mail dtd: 23.04.2019

Report No. : MSK/UDR/2020-21/1400
Date : 04.12.2020
Sample No. : MSKGL/ED/2020-21/11/00621
Sample Description : Ground Water from Tube well (Mine Office)
Sample Mark : Karunda Lime Stone Mine
Date of Sampling : 11.11.2020

ANALYSIS RESULT OF WATER AS PER IS : 10500 – 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 25°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rffm: 2012	7.39
2.	Conductivity at 25°C in µmhos/cm	---	---	IS 3025 (Part 14)- 2013	987
3.	Colour in Hazen	5	15	IS 3025 (Part 4)-1983; Rffm:2002	<1.0
4.	Odour	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
5.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	<1.0
6.	Total Dissolved Solids in mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2002	584
7.	Total Suspended Solids in mg/l	---	---	IS 3025 (Part 24)-1986; Rffm:2009	<2.5
8.	Total Hardness as CaCO ₃ in mg/l	200	600	IS 3025 (Part 21)-2013	322
9.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2009	121
10.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2009	4.5
11.	Total Alkalinity as CaCO ₃ in mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	378
12.	Chloride as Cl in mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2009	99
13.	Oil & Grease in mg/l	---	---	IS 3025(Part 39)-Rffm 2009	<1.4
14.	Fluoride as F in mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	0.58
15.	Iron as Fe in mg/l	0.3	No relaxation	IS 3025 (Part 53)-1988 Rffm: 2009	<0.05

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For Mitra S. K. Pvt. Ltd.



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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works, Nimbahera

C/o Kailash Nagar – 312617

Nimbahera – Distt. Chittorgarh (Raj.)

Reference No.& Date : e-mail dtd: 23.04.2019

Report No. : MSK/UDR/2020-21/1897

Date : 31.01.2021

Sample No. : MSKGL/ED/2020-21/01/00601

Sample Description : Ground Water from Tube well (Mine Office)

Sample Mark : Karunda Lime Stone Mine

Date of Sampling : 07/01/2021

ANALYSIS RESULT OF WATER AS PER IS : 10500 – 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 25°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rffm: 2012	7.76
2.	Conductivity at 25°C in μ mhos/cm	---	---	IS 3025 (Part 14)- 2013	656
3.	Colour in Hazen	5	15	IS 3025 (Part 4)-1983; Rffm:2002	<1.0
4.	Odour	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
5.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	<1.0
6.	Total Dissolved Solids in mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2002	426
7.	Total Suspended Solids in mg/l	---	---	IS 3025 (Part 24)-1986; Rffm:2009	3.1
8.	Total Hardness as CaCO ₃ in mg/l	200	600	IS 3025 (Part 21)-2013	220
9.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2009	37
10.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2009	31.0
11.	Total Alkalinity as CaCO ₃ in mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	266
12.	Chloride as Cl in mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2009	49
13.	Oil & Grease in mg/l	---	---	IS 3025(Part 39)-Rffm 2009	<1.4
14.	Fluoride as F in mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	0.70
15.	Iron as Fe in mg/l	0.3	No relaxation	IS 3025 (Part 53)-1988 Rffm: 2009	<0.05

Checked By:-

For Mitra S. K. Pvt. Ltd.



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