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J.K. Cement Works

Kailash Nagar - 312617, Nimbahera Distt. Chittorgarh (Raj.) INDIA

CIN: L17229UP1994PLC017199

ISO 9001:2008, ISO 14001:2004 & OHSAS 18001 : 2007 CERTIFIED COMPANY

Our Ref. No.: NBH/PC-14/ 358 4

Date: 28.11.2018

To.

The Additional Director,
Indira Paryavaran Bhavan,
JOR Bagh Road,
Near JOR bagh Metro station
New Delhi

Sub: Environmental Clearance Compliance report of Maliakhera Limestone Mine.

Dear Sir,

Kindly refer Environmental Clearance letter No. J-11015/429/2008-IA.II (M) dated. 06th August 2010 & amended letter no. J-11015/429/2008-IA.II (M) ,Dated 15th May, 2018 of our **Maliakhera Mine.** 

We are enclosing herewith compliance report of Environmental Clearance conditions along with Environment Monitoring Data (Core zone & Buffer Zone) from the month of April' 2018 to September' 2018 in hard copy as well as mail as soft copy for your kind reference and record. We trust you will find the same in order.

Thanking you,

Yours Faithfully For J.K. Cement Works, Nimbahera

S.K. Acharya (Technical Head)

Encl : a/a Copy to:

**The Director**, Ministry of Environment, Forests & Climate Change, Regional office (Central Region), Kendriya Bhawan, 5th Floor, Sector 'H', ALIGANJ, **LUCKNOW-** 226020 **(U.P.)** 

**The Chairman,** Central Pollution Control Board ,Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, Maharaja Surajmal Marg, Vishwas Nagar Extension, Viswas nagar Shahdara- Behind Karkarduma high court New Delhi 11032

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





### J.K. Cement Works, NIMBAHERA (RAJ.)

(Compliance report for Expansion of Maliakhera Lime Stone Mine)

(For the period from April 2018 to September 2018)

(For the period from April 2018 to September 2018)

	Sub:- Conditions of Environment Clearance from MOEF, New Delhi Letter No. J-11015/429/2006-1A.II [M] dated 50:00:2015	. J-11015/429/2008-1A.11 (M) dated 00:00:2010
O'N O	Condition	Status
O.LYO.	(A) Specific Conditions	
(j)	ect proponent shall obtain Consent to Establish and Consent to Operate from the State Pollution Control Board and effectively implement all the conditions I therein.	Consent to Establish has been obtained under Air & Water Act for upgraded production capacity (2.2 MTPA to 3.2 MMTPA) on date 27.01.2011. Consent to operate has been obtained under Air & Water act for upgraded production capacity (2.2 MMTPA to 3.2 MMTPA) vide letter no. F (Mines)/Chittorgarh (Nimbahera)/1869(1)/2017-2018/2131-2135 dtd. 20.06.2017 (For 5 years)
(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.	Agreed
(iii)		Mining lease was initially executed on 15.12.1964 and it was renewed (First renewal) from 13.12.2004. Private land is used only after diversion for non-agriculture use from state revenue department.
(iv)		Grazing
(v)	The project proponent shall develop fodder plots in the non-mineralized area in lieu of use of grazing land.	Mining lease was initially executed on 13.12.1964 and it was renewed (First renewal) from 13.12.2004.
(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	Agreed. We have obtained permission for mining 52.0 was taken vide letter no. 21-4(286) WR/CGWA/2008-813 dtd. 17.05.2016 from CGWA, New Delhi.
(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 during the course of mining operation.	water course and / or water resources will mining operation.
(viii)	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.	Agreed and being used for plantation or temporary stored at earmarked site.
(ix)	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.	No waste is generated during the course of Minnig activity. Oury top black cotton soil is generated which is stacked at designated places, levelled and plantation is done over it.
$\otimes$	The void left unfilled in the entire excavated area of 208.76ha shall be converted into	Agreed. Presently it is an operative innie.

Report is being sent regularly on Schedule time. Last report of	Regular monitoring of ground water level and quality shall be carried out in and around	(xvi)
Surface rain water is collected in the lower most benches to augment Ground water resources. Water is also discharged in the Anicut constructed in the North side of the pit to augment water resources after rainy season. The check dam & injection well with filter pit are developed to augment the water resource.	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.	(xv)
Regular water sprinkling by deploying water sprinkler is done on the haul roads to prevent the dust becoming air borne during transportation of vehicles. Wet drilling system is practiced on the existing setup for drilling machine.	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.	(xiv)
Agreed, Plantation done during the year 2018-19 (upto sept. 2018) within lease 1235 nos. plants covering 1.0 ha. area. Total Plantation done till date is 26905 nos. in inside and 11084 nos. in outside lease area. Survival rate of plantation is 58.98% inside lease area and 54.59% outside lease area. Total plantation covered area till date is 14.64 ha. in inside lease area and 4.65 ha. outside lease area and green belt of 19.40 ha. area.	Plantation shall be raised in an area of 19.64ha 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.	(xiii)
Since there is no generation of waste dump. Only Top black cotton soil is generated which is stacked, levelled and used for plantation. The plantation is protected by barbed wire fencing.	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.	(xii)
	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 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.	
Garland drain system maintained all around the Mining pit, outside the Mining limit for proper water harvesting. Check dams and siltation ponds are provided to control the flow of sediments, silt in and around the Mine working. There is no generation of waste and all the blasted material is used for manufacturing of Cement.	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.	(X)
	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. Peripheral fencing shall be carried out all along the excavated area.	

			and				Water injection system on Wagon drill has been pro suppresses dust at its source of generation.	Regular water spraying by deploying water tanker is Mineral handling area.	be provided for Sewage treatment Plant is already installed in the colony for Nimbahera plant & mines. No waste water generating during mining operation and workshop waste water is collected in pit and use for dust suppression at Limestone belt conveyor.
the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year – premonsoon (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.	Appropriate mitigative measures shall be taken to prevent pollution of the Murlia dam in consultation with the State Pollution Control Board.	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of ground water required for the project.	Suitable rainwater harvesting measures on long term basis shall be planned implemented in consultation with the Regional Director, Central Ground Water Board.	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.	Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	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.	Drills shall either be operated with dust extractors or equipped with water injection system.	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.	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.
	(xvii)	(xviii)	(xix)	(xx)	(xxi)	(xxii)	(xxiii)	(xxiv)	(xxx)

Monitoring data is regularly submitting prescribed offices.	Data on ambient air quality RSPM (Particulate matter with size less than 10 micron i.e., PM <sub>10</sub> ) & NO <sub>x</sub> should be regularly submitted to the Ministry of Environment and Forests including its Regional Office located at Lucknow and the State Pollution Control	ઉ
Monitoring at four stations is already being done because it is our existing mine. Latest report on air monitoring is enclosed as annexure –(III)	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.	(iv)
Agreed.	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.	(ii)
Agreed, Mining will be done in accordance with approved mining plan / Scheme of mining.	No change in the calendar plan including excavation, quantum of mineral limestone and waste should be made.	(ii)
Agreed. Mining will be done in accordance with Approved Mining Plan / Scheme of Mining.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	(i)
	(B) GENERAL CONDITIONS	v
	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 compliance.	
Agreed, These critical parameters are measured periodically during ambient air monitoring and monitoring report is enclosed as annexure-(III). No waste water is generating during mining	The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e. PM <sub>10</sub> ) and NO <sub>x</sub> 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	(xxix)
No construction labours are engaged in Mine.	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.	(xxviii)
	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.	(xxvii)
Regular initial medical examination and periodical medical examination is being carried out. During the year 2018-19 (upto sept.), 05 nos. of initial and 12 nos. of periodical medical examination were done.	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.	(xxvi)

	IS.	
(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.	Agreed and being implemented to control rugitive dust emission by regular water spraying 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 pluce / muffs.	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 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease treated be installed before discharge of workshop effluents.	Agreed. No industrial waste water is generated in the Mine. Periodical analysis of Mine pit water reveals that there is no presence of any kind of toxic substance.
(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	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 setup under the control of a Senior Executive, who will report directly to the Head of the Organization.	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.	A separate fund is kept for environment protection measures and report is being sent regularly to the concerned authority. Environment budget 2018-19 and expenditure 2017-18 detail is already submitted vide letter no. NBH/PC/14/1011 dated 29.05.2018.
(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.	Agreed
(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.	We shall extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
(xix)	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 periodically. It shall simultaneously be sent to the Regional office of the Ministry of Environment and Forests, Lucknow, the respective	Agreed. Six monthly reports is already submitting to concern offices as given in previous clearance letter. Last Six Monthly Monitoring report was sent on 29.05.2018 vide letter no. NBH/PC/14/1011.
(xv)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila	Implemented.

9.	, <del>%</del>	EC An	(ших)	()	(xvi)	
All other Specific and General conditions mentioned in this Ministry's EC letter no. J-	The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the provision of clause 7 (ii) of Environmental Impact Assessment Notification, 2006 and hereby amended the Environmental Clearance of M/s J.K.Cement Works, dated 06.08.2010 w.r.t. Installation of Crusher of 1500 TPH along with Overland Rubber Belt Conveyers System (OLBCs) under clause 7(ii) of the EIA Notification, 2006 of Limestone Mine having production capacity of 3.2 Million TPA, located at Village - Maliakhera, Tehsil - Nimbahera, District - Chittorgarh Rajasthan in MLA of 315.409 ha.	Amended letter no. J-11015/429/2008-IA.II (M) ,Dated 15th May, 2018.	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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Lucknow.	The mint with a sixty of the si	Parisad, 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.  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.  The environmental statement for each financial year ending 31st 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.	
Noted, Complying with as above	Installation of Crusher of along with Overland Rubber Belt Conveyers System (OLBCs) under progress & Consent to Establish has been granted from RSPCB, Jaipur vide file No. F (SCMG) /Chittorgarh (Nimbahera)/14(1)/2018-2019/3034-3036 & Order No. 2018-2019/SCMG/4565, Dated 02/08/2018.		Implemented & the necessary information already sent to the concerned authority.	0- the management information of moder court to	Complied.  Complying with, The Environment statement report of FY 2017-18 has submitted vide letter no .NBH-PC-13/2746, Date: 26.09.2018.	

### Maliakhera Limestone Mine

(J. K. Cement Works, Nimbahera)

### Vehicular Exhaust Emission Measurement

S. No.	Type of Machine	Machine No.	PUC Limit	No. of Reading	Average PUC limit	Date of testing	Remarks
					as per test report		8.
1	Tipper	RJ27 GB 5813	< 65%	6	38.6	22.07.2018	
2	Tipper	RJ27 GB 5800	< 65%	6	37.3	22.07.2018	
3	Tipper	RJ27 GB 5816	< 65%	6	37.3	22.07.2018	
4	Tipper	RJ27 GC 6554	< 65%	6	38.6	22.07.2018	
5	Tipper	RJ27 GC 5797	< 65%	6	46.4	22.07.2018	
6	Tipper	RJ27 GC 5917	< 65%	6	27.5	22.07.2018	
7	Tipper	RJ27 GC 6556	< 65%	6	29.4	22.07.2018	
8	Tipper	RJ27 GC 5921	< 65%	6	34.2	22.07.2018	
9	Tipper	RJ27 GC 6553	< 65%	6	31.8	22.07.2018	
10	Tipper	RJ27 GB 2023	< 65%	6	39.3	22.07.2018	
11	Tipper	RJ27 GC 3285	< 65%	6	37.3	22.07.2018	
12	Tipper	RJ27 GC 5919	< 65%	6	29.4	22.07.2018	
13	Tipper	RJ27 GC 5918	< 65%	6	37.3	22.07.2018	
14	Tipper	RJ27 GC 3284	< 65%	6	. 37.3	22.07.2018	
15	Tipper	RJ27 GC 3280	< 65%	6	37.3	22.07.2018	
16	Tipper	RJ27 GC 5920	< 65%	6	28.4	22.07.2018	
17	Tipper	RJ27 GC 3283	< 65%	6	34.5	22.07.2018	
18	Tipper	RJ27 GB 5799	< 65%	6	34.5	22.07.2018	
19	Tipper	RJ27 GB 5815	< 65%	6	32.5	22.07.2018	
20	Tipper	RJ27 GC 6552	< 65%	6	29.6	22.07.2018	
21	Tipper	RJ27 GC 3282	< 65%	6	41.3	22.07.2018	
22	Tipper	RJ27 GB 5814	< 65%	6	37.5	22.07.2018	
23	Tipper	RJ27 GC 6555	< 65%	6	32.5	22.07.2018	
24	Tipper	RJ27 GB 5802	< 65%	6	45.5	22.07.2018	
25	Tipper	RJ27 GB 5796	< 65%	6	29.5	22.07.2018	

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Deepak Kalla Dy. G. M. (Mines)

Mines Manager Maliakhera Limestone Mines J. K. Cement Works NIMBAHERA ( RAJ.)

### Maliakhera Limestone Mine

### **Blast Vibration report**

From April-18 to Sept-18

Sr.No.	3 to Sept-18 Date	PPV	Frequency
1	4/14/2018	1.08 (T)	73
2	4/20/2018	2.62 (T)	47
3	4/21/2018	0.762	47
4	4/23/2018	0.953	>100
5	4/24/2018	1.21	85
6	5/4/2018	3.05	47
7	5/6/2018	2.16	39
8	5/10/2018	1.71	57
9	5/17/2018	2.35	43
10	5/25/2018	2.29	85
11	5/28/2018	1.71	57
12	6/1/2018	2.03	85
13	6/2/2018	2.67	85
14	6/5/2018	3.87	73
15	6/7/2018	3.11	>100
16	6/8/2018	1.27	37
17	6/9/2018	1.21	64
18	6/15/2018	1.71	>100
. 19	6/19/2018	0.953	>100
20	6/19/2018	1.78	>100
21	6/21/2018	3.05	85
22	6/25/2018	2.48	39
23	7/1/2018	1.08	64
24	7/10/2018	2.75	85
25	8/4/2018	2.41	57
26	8/19/2018	2.67	85
27	8/21/2018	3.68	34
28	8/24/2018	2.41	73
29	8/31/2018	1.44	>100
30	9/2/2018	1.02	57
31	9/13/2018	3.37	43
32	9/21/2018	3.05	>100
33	9/25/2018	2.1	57

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Deepak Kalla D.G.M. (Mines)

Mines Manager
Maliakhora Limestone Mines
J. K. Cement Works
NIMBAHERA (RAJ.)

## J.K. Cement WORKS, NIMBAHER( 2AJ)

### MALIAKHERA LIMESTONE MINE

# SIX MONTHLY AMBIENT AIR QUALITY & NOISE MONITORING REPORT

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

Sample duration: 24 hourly sample, (monthly average basis)

		00	687.0	744.3	629.8	458.0	400.8	515.3
	ooint	Nox	27.4	28.7	25.2	18.8	20.4	19.6
	Near loading point	$SO_2$	13.2	14.4	11.8	7.6	8.5	6.6
	Near ]	SPM PM10	51.3	52.6	47.4	35.0	37.0	39.8
Sis)		SPM	29.8 973.3 393.0	32.4 916.0 410.0 52.6	27.4 858.8 382.0	25.6 629.8 289.0	305.0	629.8 322.0
(monthly average basis)	шо	CO	973.3	916.0	858.8	629.8	24.0 515.3	
ıly aver	ance Fra	Nox			27.4		24.0	26.2
(month	O Meter Distance Drilling Operation	SO <sub>2</sub>	14.3	18.4	15.4	13.5	12.0	14.4
	3 to 10 Meter Distance From Drilling Operation	SPM PM10	53.7	57.6	51.6	40.0	42.0	44.5
	3 to	SPM	458.0	486.0	422.0	346.0	360.0	372.0
		00	11.9 25.7 744.3	30.6 858.8	744.3	515.3	629.8	515.3
	Office	Nox	25.7	30.6	23.5	21.5	24.7	22.9
	Near Ravana Office	SO <sub>2</sub>	11.9	16.4	12.3	9.3	10.4	11.6 22.9
	Near I	PM10	50.6	55.5	48.3	38.0	41.0	46.5
		SPM PM	23.6 515.3 421.0 50.6	629.8 440.0		305.0	320.0	342.0
		8	515.3		21.4 515.3 402.0	15.8 400.8 305.0	17.4 515.3 320.0	15.8 515.3 342.0
	fice	Nox		25.3	21.4			15.8
	Near Mine Office	SO <sub>2</sub>	10.8	12.7	8.6	5.7	7.2	10.4
	Near I	PM10	46.2	49.2	44.2	26.0	30.0	35.1
		SPM	359.0	373.0	352.0	246.0	269.0	305.0
		Month	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18

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

	Near Mi	Near Mine Office		Near Ravana Office
Month	52	NOISE LEVEL	(db(A)	
	1	Night Time Day	Day Time	Night Time
Apr-18	1	58.6	69.2	59.3
Mav-18		59.6	70.2	61.4
Tun-18	1	57.2	2.69	56.3
Inl-18		53.6	67.5	54.3
A119-18	64.5	52.2	2.99	53.4
Sep-18	1	53.5	68.1	55.6



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Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/939

Date : 31.08.2018

Sample No.: MSKGL/ED/2018-19/08/01644

Sample Description: Ambient Air

Sampling Location : Near Mine Office (Milakhera Mine)

Date of Sampling: 17/18.08.2018

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

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
ı	Particulate matter (PM 10) in µg/m3	100	85	IS: 5182:(Part-23)-2006
2	Particulate matter( PM 2.5 ) in µg/m3	60	49	USEPA CFR-40, Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m3	80	6.9	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m3	80	26.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m <sup>3</sup>	2	0,37	IS 5182 :(Part-10) :1999

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

Report Propared By:

For State S. K. W. Ltd.

Authorized Signatory

O. L.



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Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/940

Date : 31.08.2018

Sample No. : MSKGL/ED/2018-19/08/01645

Sample Description: Ambient Air

Sampling Location: Near Loading Point (Maliakhera Mine)

Date of Sampling: 20/21.08.2018

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

SL, No.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM 10) in µg/m³	100	97	IS: 5182:(Part-23)-2006
2	Particulate matter( PM 2.5 ) in μg/m <sup>3</sup>	60	51	USEPA CFR-40, Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m3	-80	6.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m3	80	27.7	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m <sup>3</sup>	2	0.38	IS 5182 :(Part-10) :1999

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

Report Repared By

For this S. K. Tvi. Id.



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Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt. Chittorgarh ( Raj.)

Report No.: MSK/UDR/2018-19/941

Date : 31.08.2018

Sample No.: MSKGL/ED/2018-19/08/01646

Sample Description: Ambient Air

Sampling Location: Near Rayana Office (Maliakhera Mine)

Date of Sampling: 20/21.08.2018

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

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM 16) in µg/m³	100	71	IS: 5182:(Part-23)-2006
2	Particulate matter( PM 2.5 ) in µg/m3	60	36	USEPA CFR-40, Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m3	80	5.9	1S: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m3	80	23.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m3	2	0.37	IS 5182 :(Part-10) :1999

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

Report Prepared By:

For the S. K. Ryand.

Aluhorized Signator



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Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/942

Date : 31.08.2018

Sample No.: MSKGL/ED/2018-19/08/01647

Sample Description: Ambient Air

Sampling Location: Pipliya gadia Village (Maliakhera

Mine)

Date of Sampling: 20/21.08.2018

Reference No. & Date: e-mail dtd: 07.06,2018

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM 10) in µg/m3	100	67	IS: 5182:(Part-23)-2006
2	Particulate matter( PM 2.5 ) in µg/m3	60	34	USEPA CFR-40, Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m3	80	5.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m3	80	21.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m <sup>3</sup>	2	0.20	IS \$182 :(Part-10) :1999

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

Report Propaged By:

Fredrica S. K. Evyl Ltd.



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Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/937

Date : 31.08.2018

Sample No.: MSKGL/ED/2018-19/08/01642

Sample Description: Ambient Air

Sampling Location: 3-10 Meter Distance from Drilling

Operation (Milakhera Mine)

Date of Sampling: 17/18.08.2018

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

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM 10) in µg/m3	100	96	IS: 5182:(Part-23)-2006
2	Particulate matter( PM 2.5 ) in μg/m3	60	52	USEPA CFR-40, Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m3	80	6.6	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m³	80	26.7	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m <sup>3</sup>	2	0.41	IS 5182 :(Part-10) :1999

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

Report Prepared By:

For Mure A. Superior.

Authorized Signators



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### TEST REPORT

Name & Address of the Customer:

Report No.: MSK/UDR/2018-19/956

J.K.Cement Works, Nimbahera

Date : 31.08.2018

Distt. Chittorgarh (Raj.)

Sample No.: MSKGL/ED/2018-19/08/01673 & 01674

Sample Description: Noise Monitoring (Maliakhera Mine)

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

### **ANALYSIS RESULT**

SI. No.	Sampling Date	Sampling Location	Results Leq dB(A)		
			Day Time	Night Time	
1.		Near Mine Office (Maliakhera Mine)	56.8	44.0	
2.	17/18.08.2018	Near Ravana Office (Maliakhera Minc)	54,5	42.8	
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70	

Report Prepared by :

For Mitter State Trivale Limited

Authorised Signature



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Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt, Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/395

: 30.06.2018 Date

Sample No.: MSKGL/ED/2018-19/06/01437

Sample Description: Ambient Air

Sampling Location: 3-10 Meter Distance from Drilling

Operation (Milakhera Mine) Date of Sampling: 21/22.06.2018

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

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM 10) in µg/m³	100	92	IS: 5182:(Part-23)-2006
2	Particulate matter( PM 2.5 ) in µg/m3	60	50	USEPA CFR-40, Part-50, Appendix-L.
3	Sulphur dioxide( SO2) in µg/m³	80	6.1	JS: 5182 (Part-2)-2001
-,1	Nitrogen dioxide (NO2) in µg/m³	80	29,4	IS: 5182 (Part- 6)-2006
3	Carbon monoxide(CO) in mg/m <sup>3</sup>	2	0.38	IS 5182 :(Part-10) :1999
6	Ozone (O3) in µg/m <sup>3</sup>	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lødge (Method-411)
7	Ammonia (NH3) in μg/m³	400	21,6	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in µg/m <sup>3</sup>	ı	0.23	EPA-IO 3,2
9	Nickel (Ni) in ng/m <sup>3</sup>	20	9.8	EPA-IO 3.2
10	Arsenic (As) in ng/m <sup>3</sup>	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6116) in µg/m <sup>3</sup>	5	<2,08	IS-5182 : Part, 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m <sup>3</sup>	1	⊴0.4	IS 5182 : Part, 12 : 2004

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

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Name & Address of the Customer :

J.K.Cement Works, Nimbahera

Distt, Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/396

Date : 30.06.2018

Sample No.: MSKGL/ED/2018-19/06/01438

Sample Description: Ambient Air

Sampling Location: Maliakhera Village (Maliakhera Mine)

Date of Sampling: 22/23.06.2018

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

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM 10) in µg/m³	100	68	IS: 5182:(Part-23)-2006
2	Particulate matter( PM 1.8 ) in µg/m3	60	34	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m <sup>3</sup>	80	5.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m³	80	20.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m <sup>3</sup>	2	0.16	1\$ 5182 ((Part-10) :1999
6	Ozone (O3) in µg/m <sup>3</sup>	180	∈19,62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in μg/m³	400	11.7	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
- 8	Lead (Pb) in µg/m <sup>3</sup>	1	< 0.02	EPA-10 3.2
9	Nickel (Ni) in ng/m³	20	<4.0	EPA-10 3.2
10	Arsenic (As) in ng/m <sup>3</sup>	6	<1,0	APHA: 22nd - 3114 C
11	Benzene (C6116) in µg/m <sup>3</sup>	5.	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m <sup>3</sup>		<0.4	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

For May Santa



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Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt. Chittorgarh ( Raj.)

Report No.: MSK/UDR/2018-19/397

Date : 30,06,2018

Sample No.: MSKGL/ED/2018-19/06/01439

Sample Description: Ambient Air

Sampling Location: Near Mine Office (Milakhera Mine)

Date of Sampling: 21/22.06.2018

Reference No.& Date: e-mail dtd: 07,06.2018

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
31., 110.	Particulate matter (PM 10) in μg/m³	100	78	IS: 5182;(Part-23)-2006
2	Particulate matter( PM 2,5 ) in µg/m <sup>3</sup>	60	46	USEPA CFR-40, Part-50. Appendix-L
3	Sulphur dioxide( SO2) in µg/m³	-80	6.0	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m³	80	25,4	IS: 5182 (Part- 6)-2006
- 5	Carbon monoxide(CO) in mg/m <sup>3</sup>	2-	0,40	IS 5182 :(Part-10) :1999
6	Ozone (O3) in µg/m <sup>3</sup>	180	<19.62	Method of Air sampling, 3rd Edn. By James P Lodge (Method-411)
7	Ammonia (NH3) in μg/m³	400	21.4	Method of Air sampling, 3rd Edn. By James I Lodge (Method-401)
8	Lead (Pb) in ug/m3	1	0.18	EPA-IO 3.2
9	Nickel (Ni) in ng/m <sup>3</sup>	20	6.8	EPA-10 3.2
10	Arsenic (As) in ng/m <sup>3</sup>	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in µg/m <sup>3</sup>	5	<2.08	IS 5182 : Part, 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m <sup>3</sup>	l i	<0.4	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

For This A S VI Lid.



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Name & Address of the Customer:

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Distt, Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/398

Date : 30.06.2018

Sample No.: MSKG1/ED/2018-19/06/01440

Sample Description: Ambient Air

Sampling Location: Near Loading Point (Maliakhera Mine)

Date of Sampling: 22/23.06.2018

Reference No.& Date: e-mail dtd: 07,06,2018

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
	Particulate matter (PM 10) in µg/m³	100	94	IS: 5182:(Part-23)-2006.
2	Particulate matter( PM 2,5 ) in µg/m <sup>3</sup>	60	51	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m³	80	6.6	IS: 5182 (Part-2)-2001
A	Nitrogen dioxide (NO2) in μg/m <sup>3</sup>	80	29,0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m³	2	0.33	IS 5182 :(Part-10) :1999
6	Ozone (O3) in µg/m <sup>3</sup>	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in μg/m <sup>3</sup>	400	22.0	Method of Air sampling, 3rd Edn, By James P. Lodge (Method-401)
8	Lead (Pb) in µg/m <sup>3</sup>		0.21	EPA-10 3.2
9	Niekel (Ni) in ng/m <sup>3</sup>	20	9,60	EPA-IO 3.2
10	Arsenic (As) in ng/m <sup>3</sup>	6	~1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in µg/m <sup>3</sup>	5	<2.08	IS 5182 ; Part. 11 : 2006
13	Benzo(a) pyrene (BaP) in ng/m <sup>3</sup>	1	-:0:1	1S 5182 : Part. 12 : 2004

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

Report Propared By:

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Name & Address of the Customer:

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Report No.: MSK/UDR/2018-19/399

Date : 30.06.2018

Sample No. : MSKGL/ED/2018-19/06/01441

Sample Description: Ambient Air

Sampling Location: Near Ravana Office (Maliakhera Mine)

Date of Sampling: 21/22.06.2018

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

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM 16) in µg/m³	100	68	1S: 5182:(Part-23)-2006
2	Particulate matter( PM 2.8 ) in µg/m <sup>3</sup>	60	38	USEPA CFR-40, Part-50, Appendix-L
3	Sulphur dioxide( SO2) in µg/m³	80	6.3	IS; 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m³	80	25,4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m3	2	0.42	1S-5182 :(Part-10) :1999
6	Ozone (O3) in µg/m <sup>3</sup>	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in μg/m <sup>3</sup>	400	21.0	Method of Air sampling, 3rd Edn. By James P Lodge (Method-401)
8	Lead (Pb) in μg/m³	1	0.21	EPA-IO 3.2
9	Nickel (Ni) in ng/m <sup>3</sup>	20	8.40	EPA-10 3.2
10	Arsenic (As) in ng/m <sup>3</sup>	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6116) in µg/m <sup>3</sup>	5	<2.08	IS 5182 : Part, 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m³		<0.4	IS 5182 ; Part. 12 ; 2004

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

Report Propared By:

Authorized Signatory



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Name & Address of the Customer:

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

Report No.: MSK/UDR/2018-19/400

: 30.06.2018

Sample No.: MSKGL/ED/2018-19/06/01442

Sample Description: Ambient Air

Sampling Location: Pipliya gadia Village ( Maliakhera

Date of Sampling: 22/23.06.2018

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

	Dally (wate	Limit	Result	Method of Test Refference
SL. NO.	Pollutants	100	74	IS: 5182:(Part-23)-2006
l	Particulate matter (PM 10) in µg/m3			USEPA CFR-40,Part-50, Appendix-L.
2	Particulate matter( PM 2,5 ) in µg/m3	60	38	
3	Sulphur dioxide(SO2) in µg/m3	80	5.8	IS: 5182 (Part-2)-2001
	Nitrogen dioxide (NO2) in μg/m <sup>3</sup>	80	23.1	IS: \$182 (Part- 6)-2006
4		2	0.2	IS 5182 :(Part-10) :1999
- 6	Carbon monoxide(CO) in mg/m <sup>3</sup> Ozone (O3) in µg/m <sup>3</sup>	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in μg/m³	400	11.0	Method of Air sampling, 3rd Edn. By James P Lodge (Method-401)
8	Lead (Pb) in µg/m <sup>3</sup>	1	<0.02	EPA-IO 3,2
9		20	<4.0	EPA-IO 3.2
	Niekel (Ni) in ng/m <sup>3</sup>	6	<1.0	APHA 22nd - 3114 C
10	Arsenic (As) in ng/m <sup>3</sup>	5	<2.08	1S 5182 : Part. 11 : 2006
11	Benzene (C6H6) in µg/m³ Benzo(a) pyrene (BaP) in ng/m³	ī	<0.4	1S 5182 : Part. 12 : 2004

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

Report Prehared By:

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### TEST REPORT

Name & Address of the Customer:

J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No.: MSK/UDR/2018-19/413

Date : 30.06,2018

Sample No. : MSKGL/ED/2018-19/06/01460 & 01461

Sample Description: Noise Monitoring

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

### **ANALYSIS RESULT**

CI No.	Sampling Date	Sampling Location	Results Leq dB(A)		
SI. No.	Samping Date	Sampling Execution	Day Time	Night Time	
1.		Near Mine Office (Maliakhera Mine)	57.6	47.3	
2.	21/22.06.2018	Near Ravana Office (Maliakhera Mine)	55.8	46.2	
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70	

Report separed by :

For Miles K. Private United