

JK Cement LTD.

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

CIN : L17229UP1994PLC017199

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

Our Ref. No.: MGR-PC-21/C13

Regd.AD.

Date: 30.05.2020

To,
The Director, (I)
Indira Paryavaran Bhavan,
JOR Bagh Road, Aliganj,
New Delhi-110003

Sub: Environmental Clearance Compliance report for Expansion of Clinker and Cement production, Captive power plant and WHR of M/s J.K. Cement Works, Mangrol at Village- Mangrol, District- Chittorgarh, Rajasthan.

Ref.: EC letter no. J-11011/267/2013-IA .II (I) dated. 08.09.2016 & amendment dated 08.03.2019

Dear Sir,

With reference to above stated Environment Clearance (EC) accorded for our Mangrol plant, Clinker (2.90 MMTPA to 5.65 MMTPA) and Cement (3.54 MMTPA to 7.05 MMTPA) Captive Power Plant from 25 MW to 60 MW, and WHRB from 10 MW to 36 MW at our J.K. Cement Works, Mangrol. Please find attached herewith six monthly compliance for the period from October' 2019 to March' 2020. As per MoEF & CC notification no. S.O. 5845 (E) 26.11.2018 the same soft copy has been send to email id. roc.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 for your kind reference and record please. We trust you will find the same in order.

Thanking you,

Yours Faithfully
For J.K. Cement Works, Mangrol

S.K. Acharya
Head (Environment & Power Management)

Encl: a/a
Copy to:

- 1.The Additional Principal Chief Conservator of Forest (C) Ministry of Environment, Forests & Climate Change, Regional office(CZ), 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, New Delhi 110032
3. The Chairman, 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. Power, Bamania
J. K. Cement Works, Muddapur
J. K. White Cement Works, Gotan





JK Cement LTD.

**HALF YEARLY COMPLIANCE REPORT
OF
ENVIRONMENTAL CLEARANCE LETTER NO.**

J-11011/267/2013-IA. II (I) Dated 08/09/2016

Period: Oct-19 to Mar-20

For

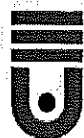
**Expansion of Integrated Cement Project:
Clinker (2.90 MMTPA to 5.65 MMTPA) and Cement (3.45 MMTPA to
7.05 MMTPA) Captive Power Plant from 25 MW to 60 MW, and
WHRB from 10 MW to 36 MW**

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, MANGROL,
Villages; Mangrol, Tehsil: Nimbahera, District: Chittorgarh (Raj)**



**JK SUPER
CEMENT
BUILD SAFE**

Validity of the statutory approvals obtained in compliance of EC:

- Environmental Clearance has been issued vide letter no -. J-11011/267/2013-IA-II (I)] dated 08th September'2016.
- Mangrol Line-1 CTO for production of Cement (0.95 MMTPA) and Clinker (.75 MMTPA) was issued vide letter no. F (Tech) / Chittorgarh (Nimbahera)/ 1(1)/ 2008 - 2009 /9890-9892 Order No. 2017 - 2018 / CPM / 5102 dated 07.03.2018, valid up to 30.09.2022.
- Amendment in Mangrol Line-1 CTO issued on 22.10.2018 to cement plant.
- Mangrol Line-2 CTO for production of Cement (2.50 MMTPA) and Clinker (2.15 MMTPA) was issued vide letter no. F (CPM) / Chittorgarh (Nimbahera)/ 10(1)/ 2017 - 2018 /6190-6192 Order No. 2017 - 2018 / CPM / 4990 dated 03.10.2017, valid up to 30.04.2022.
- Amendment in Mangrol Line-2 CTO issued on 25.01.2018 & 22.10.2018 to cement plant.
- Mangrol Line-3 CTO for production of Cement (3.6 MMTPA) and Clinker (2.75 MMTPA) was issued vide letter no F(CPM)/Chittorgarh(Nimbahera)/11(1)/2018-2019/2188-2190 Order No. 2019-2020/CPM/5515 dated 27.09.2019, valid up to 31.07.2024.
- CTO for 25 MW Captive Thermal Power Plant vide letter no. F(Tech)/Chittorgarh(Nimbahera)/1(1)/2008-2009/1521-1523 dated 30/05/2017 which is valid upto 31.03.2022.
- CTO for 10.0 MW Waste Heat Recovery Plant vide letter no. F(Tech)/CHITTORGARH(NIMBAHERA)/1(1)/2008-2009/1530-1532 dated 30.05.2017 which is valid upto 31.03.2022.

G. Singh

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)
(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

S. No.	Condition	Status
	(A) Specific Conditions	
(i)	The project proponent should install 24x7 air monitoring devices to monitor air emission, as provided by the CPCB and submit report to Ministry and its Regional Office.	Complying with, We have installed the continuous ambient air monitoring station (CAAQMS) at 4 location and real time data uploading at CPCB/RPCB web portal.
(ii)	The Standard issued by the Ministry vide G.S.R. No. 612 (E) dated 25 th August, 2014 and subsequent amendment dated 9 th May, 2016 and 10 th May, 2016 regarding cement plant with respect to particulate matter, SO ₂ and NO _x shall be followed.	Complying with. We are achieving the new emission standard as per G.S.R. no. 612 (E) dated 25 th August, 2014 & subsequent amendment dated 9 th May, 2016 and 10 th May, 2016 for our existing plant Line – 1, 2 & 3. Stack emission monitoring report for the period Oct-19 to Mar-20 enclosed as Annexure-1 .
(iii)	Continuous stack monitoring facilities to monitor gaseous emissions from process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filter to coal mill and cement mill. Low Nox burner shall be provide to control Nox emissions. Regular calibration of the instruments must be ensured.	Continuous gaseous emission monitoring system (CEMS) has already installed at all major stack. Adequate Air Pollution Control equipment's has been provided for particulate matter viz. 1. ESP - Clinker cooler 2. Bag house – Raw mill / Kiln 3. Bag house – Coal mill 4. Bag house – Cement mill
(iv)	Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonnes for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.	VVFD has been installed in major motor to reduce the power consumption. We are regularly doing efforts to achieve thermal energy.
(v)	The National Air Quality Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16 th November, 2009 shall be followed.	Complying and following.
(vi)	AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the	AAQ results are well within the prescribed norms.

[Signature]
30/5/20

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)

(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

	emissions well below prescribed standards.	
(vii)	Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.	To control the secondary fugitive emissions, bag filter installed at belt transfer point and encloser at hopper, water spray system, covered shed and storage silo for finished product.
(viii)	A statement on carbon budgeting including the quantum of equivalent CO ₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed expansion of quantum of equivalent CO ₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared within a period of 6 Months and subsequently it should be prepared every year.	We are continuously making efforts to reduce CO ₂ emissions : 1. In future we will increase PPC production by which less clinker will be require. 2. More Power generation through WHR. 3. Thermal Energy is continuously decreasing from last three years.
(ix)	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc.	No any workmen/ employee are being allowed to work more than 4 hr. where temperature is more than 50°C. However during shutdown, works start only after cooling of equipment. Personal protective equipment (PPEs) are being provided to respective worker.
(x)	Arsenic and Mercury shall be monitored in emissions, ambient air and water.	Arsenic and mercury monitoring in emissions, ambient air & water is being carried out by MOEFCC recognised lab. Monitoring report of same enclosed as Annexure-1 .
(xi)	The coal yard shall be lined and covered.	Coal stored in covered shed.
(xii)	The project proponent shall prepare a report on impact of project on surrounding reserve forest within six months and will get it approved from the State Forest Department. A copy of the conservation with the State Forest and Wildlife Department. A copy of the same should be submitted to the Ministry and its Regional Office.	Not applicable, Project doesn't fall any National park, Wildlife Sanctuary and forest area within 10 kms.
(xiii)	The project proponent shall take all precautionary measures for conservation and	Complying with,

GR Singh

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)
(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

	protection of wild fauna in the study area. A Wildlife Conservation Plan specific to this project site shall be prepared in consultation with State Forest and Wildlife Department. A copy of the Conservation plan shall be submitted to the Ministry and its Regional Office.	Unit is regularly taking care of flora & fauna in surrounding area. We have also submitted wild life conservation plan at DFO office for approval vide our letter no. MGR/PC/21/406, Dated 23.04.2019.
(xiv)	The project proponent will also provide the latest status of the environment compliances in respect of its existing plant.	Complying with, Periodical EC compliance is being submitted and last EC compliance report submitted vide our letter no. MGR/PC/21/C13/3722 dated 26.11.2019 & soft copy send by email on dated 28/11/2019 for the period from April 19 to Sept 19.
(xv)	Efforts shall be made to reduce impact of the transport of the raw material and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.	Complying with, Raw material like coal/ petcoke is being transported through rail and maximum quantity of finished product dispatch through rail. Fly ash is being sourced from nearby to reduce the transportation impact. Separate truck parking area facilitated near the factory gate and regular water spray on road & yard being done.
(xvi)	Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated waste water shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process waste water shall be discharged outside the factory premises and 'zero' discharge shall be adopted.	We have already installed air cooled condensers in our captive power plant & installation work is in progress in WHRS. 100% waste water is being used in cement plant for dust suppression after treatment and maintaining ZERO liquid discharge unit.
(xvii)	Efforts shall be made to make use of rain water harvested. If needed capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	Rain water harvested in captive limestone mine pit, Remaining water requirement meet from ground water.
(xviii)	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated waste water shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986.	Regularly monitoring done for Domestic effluent after treatment in STP, waste water from CPP & WHRS after neutralization and treated water achieved the norms prescribed by the State Pollution Control Board. Wastewater monitoring report is attached as Annexure-1.
(xix)	All the bag filter, raw mill dust, coal dust, clinker dust and cement dust from Pollution Control devices shall be recycled and reused in the process and used for	Raw mill dust, coal dust, clinker dust and cement dust from Pollution control equipment like Bag house / ESP are being 100%

30/5/20

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)

(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

	cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers/re-processors only.	recycled in cement plant. Hazardous waste i.e. Used Oil (5.1), Waste oil (5.2) are being sold to authorized recyclers & batteries return back to supplier.
(xx)	The kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass, etc.	We have arrangement for flexible fuel feeding system like use of coal, petcoke, hazardous wastes and other wastes including biomass etc.
(xxi)	The proponent shall examine and prepare a plan for utilization of high calorific waste such as chemical waste, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such waste and enter into an MOU for long-term utilization of such waste as per the Environment (protection) Rules, 1986 and with necessary approvals.	We are having a various hazardous waste / other waste permissions from CPCB / RSPCB to use as Alternative fuel & raw materials (AFR) in our cement plant.
(xxii)	Efforts shall be made to use the high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating hazardous waste and in accordance with Hazardous Waste Regulation and prior approval of the MPPCB .	We are using various type of hazardous waste / other waste in kiln, and ARM in cement manufacturing with due permission obtained from CPCB / RSPCB.
(xxiii)	Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.	We have achieved planation in 33 % area with planting of local species.
(xxiv)	The project proponent shall provide for solar light system for all common areas, street light, village and parking around project area and maintain the same regularly.	We have proposed 3 MW Solar power plant at own land at Bamania, Chittorgarh.
(xxv)	The project proponent shall provide for LED light in their offices and residential areas.	Complied, we have replaced existing light in the offices and residential areas by LED light.
(xxvi)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.	We are complying all recommendations made in the Charter on Corporate responsibility for Environment protection (CREP) for the Cement plants.

Geetika

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)

(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

(xxvii)	At least 2.5% of the total cost of the project shall be earmarked towards: the Enterprise Social Commitment based on Public Hearing issues, locals need and items-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regards shall be submitted to the Ministry's Regional Office.	Agreed & complied.
(xxviii)	In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.	Agreed & complied.
(xxix)	A risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of Environment Clearance letter.	Complying, We are having the onsite emergency plan with respect to following objectives. - To overcome any emergency in its initial stage and to handle Disaster in most effective manner. - To eliminate any chance of loss to Human Life. - To minimise loss of Property in the Plant and surrounding areas. - To maintain essential supplies at the time of natural Calamities and / or Public disturbances.
(xxx)	To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.	We have displayed Environment health & safety slogan / messages in the existing Plant premises to spread the awareness with respect to hazard and the associated health effects.
(xxxi)	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, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	All necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. has provided during the construction period.

GA Singh

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)

(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

(B) GENERAL CONDITIONS	
(i)	The Project authorities must strictly adhere to the stipulation made by the Rajasthan Pollution Control Board and the State Government. We have obtained Consent to Establish File No.: F (CPM)/Chittorgarh (Nimbahera)/11(1)/2018-2019/2214-2216, Order No: 2018-2019/ CPM / 5253, Dated 10/07/2018 & obtained Consent to Operate File No.: F (CPM)/Chittorgarh (Nimbahera)/11(1)/2018-2019/2188-2190, Order No: 2019-2020/ CPM / 5515, Dated 27/09/2019 from Rajasthan State Pollution Control Board for proposed expansion.
(ii)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). We will take prior approval of the Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion or modification in the plant, if any.
(iii)	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM₁₀, PM_{2.5}, SO₂ and NO_x are anticipate in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Lucknow and the SPCB/CPCB once in Six months. We have already installed 4 ambient air monitoring stations for PM 10, PM_{2.5}, SO₂ & NO_x in consultation with the State Pollution Control Board and monitoring data is being regular submitted to the Ministry and its regional office at Lucknow and the SPCB/CPCB. Monitoring report of stack emission & ambient air quality enclosed as above Annexure-1.
(iv)	Industrial wastewater shall 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 form time to time. The treated wastewater shall be utilized for plantation purpose. There is no waste water discharge from cement plant hence 'Zero discharge' facility adopted and waste water from CPP & WHR after treatment are reuse for dust suppression and machineries cooling in the cement plant.
(v)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75dBA (daytime) and 70 dBA(night time). Silencer, acoustic hoods, enclosures etc are provided at noise generation point and PPEs provided to respective workmen. Noise monitoring report of ambient air & work zone for the period of Oct-19 to Mar-20 are enclosed as Annexure-1.
(vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. Occupational health surveillance of the workers is being done periodically.
(vii)	The company shall develop rain water harvesting structures to harvest the rain Complying, We have already developed 16 nos. of injection well

GN Singh

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)

(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

	water for utilization in the lean season besides recharging the ground watertable.	and 1 recharge pond in the cement plant & colony.
(viii)	The project proponent shall also comply with all the environment protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, education programmes, drinking water supply and health care etc.	Environment protection measures and safeguards recommended in the EIA/EMP report is adopted. We have undertaken socio – economic development under CSR activities like community development programmes, education programmes, drinking water supply and health care etc.
(ix)	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Lucknow. The funds so provide shall not be diverted for any other purpose.	Complying with.
(x)	A copy of 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 suggestion/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied, A copy of Environmental clearance letter has been sent to the SDM, Nimbhaera tehsil, The Sarpanch, Gram panchayat, Mangrol, DIC, Chittorgarh, Chief Executive officer Zila parishad, Chittorgarh The District Magistrate, Chittorgarh on dated 19.09.2016 The clearance letter has uploaded on the website of the company i.e. www.jkcement.com
(xi)	The project proponent shall upload the status of compliance of the stipulated environment 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 MOEFCC at Lucknow. The respective zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Periodical EC compliance with monitored data are being uploaded at company website and same sent to MOEF, Lucknow, Delhi, CPCB, RPCB in soft copy. The criteria pollutant level namely; PM 10, SO2, NOx (ambient levels as well as stack emissions) for is being displayed at main gate of the company for the public domain.
(xii)	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this	Complied and last report submitted in soft copy on dated 26/11/2019.

for
for
for

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)

(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

	Ministry at Lucknow/ CPCB/SPCB shall monitor the stipulated conditions.	
(xiii)	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 conditions and shall also be sent to the respective Regional Office of the MOEFCC at Lucknow by e-mail.	The Environment Statement report of our existing cement plant of FY 2018-19 has submitted vide letter no. MGR/PC/21/2821-2822 & 2826, Date: 25.09.2019 to the State Pollution Control Board and regional office of the MoEF& CC at Lucknow and uploaded at company website.
(xiv)	The Project Proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment, Forest and Climate Change (MoEFCC) at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are	We have published the notice that the project has been accorded environmental clearance by the Ministry of environment & Forest in two newspaper namely as followed. 1. Dainik Bhaskar dated 17.09.2016 2. Rajasthan Patrika dated 17.09.2016
(xv)	Widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office at Lucknow.	Complied.
(xvi)	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Agreed.

Amended EC Letter from MOEF, New Delhi – J-11011/267/2013-IA.II (D), Dated 08.03.2019

Signature

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL (LINE-1, 2 & 3)
(Period Oct- 2019 to Mar-2020) Dated 30.05.2020

S. No.	Condition	Status
	<u>General Conditions</u>	
(ii)	It is mentioned that there will be no pollution load increment due to enhancement of WHRB capacity from 20 MW to 30 MW. The following measures will be implemented to increase the waste heat recovery power generation upto 10 MW: Gain of 2.5 MW and 2.9 MW power generation by enhancement of boiler inlet flue temperature (from 380 480 C) by recirculation of hot air in line-2 and line respectively, i.e., total gain will be 5.4 MW. • Installing a new boiler with efficient heat recovery, as there will be higher stream recovery with temperature of 440 degree with minimization of condensing temperature, with gain of 4.6 MW.	Agreed, The Waste Heat Recovery boiler (WHRB) is eco-friendly system & there is no increase pollution load by capacity enhancement of WHRB power generation.
(iii)	The certified EC compliance has been obtained from Regional Office (Lucknow) of MOEF&CC vide letter no. IV/ENV/R/IND167/946/2017/732 dated 09.07.2018.	Noted,
(iv)	The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.	Agreed
(v)	The proposal was considered by the Expert Appraisal Committee (Industry – I) during its 34th meeting held on 6th to 7th August, 2018. After detailed deliberations, the committee recommended for the grant of amendment to the environmental clearance with the following conditions. • The power generation from waste heat recovery boiler shall be enhanced to 20 MW to 36 MW. • The PP shall under take additional greenbelt development in 5% of the total area. • The PP shall construct 5 additional rainwater recharging pits	Proposed project is integrated with our existing unit & new cement plant L-III & hence green belt programme is common.
(vi)	The ministry considered the above recommendation of EAC and here by decided to amend the Environmental Clearance vide letter F. No. J-11011/267/2013-IAII (I) dated 08.09.2016 with the conditions as recommended by EAC in para 5 above.	Noted
(vii)	All other terms and conditions in the Environmental clearance vide letter F. No. J-11011/267/2013-IAII (I) dated 08.09.2016 are shall remain the same.	Noted

J.K. Cement WORKS, MANGROL (RAJ)
AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON
FOR UNIT-1, UNIT-2, 25 MW CPP & 10 MW WHR
(ALL VALUES IN MICROGRAMS / CUBIC METER)
(October' 2019 - March' 2020)

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR FACTORY GATE	NEAR COLONY GATE	Remarks
October'2019						
1	SPM	335	362	392	380	
2	PM10	46.50	48.92	58.40	52.57	
3	PM2.5	30.58	34.87	38.63	36.48	
4	SO2	18.30	22.81	20.29	15.89	
5	NOX	26.52	23.51	24.15	25.49	
6	CO	703	696	728	729	
November'2019						
1	SPM	348	370	410	387	
2	PM10	48.20	49.36	62.20	52.81	
3	PM2.5	31.12	36.48	41.31	37.55	
4	SO2	20.20	22.20	19.90	18.82	
5	NOX	25.70	25.53	26.22	24.06	
6	CO	565	654	856	697	

Signature
Date

24/02/2020

December'2019									
1	SPM	372	385	422	375				
2	PM10	52.80	55.90	65.50	53.40				
3	PM2.5	40.60	42.20	44.40	40.20				
4	SO2	22.60	24.20	20.80	20.40				
5	NOX	24.90	26.20	25.50	25.10				
6	CO	728	856	697	565				
January'2020									
1	SPM	363	396	436	320				
2	PM10	50.95	56.24	61.78	54.16				
3	PM2.5	38.95	39.27	42.76	41.31				
4	SO2	25.20	26.50	23.20	21.97				
5	NOX	23.63	21.87	22.82	24.32				
6	CO	657	803	729	579				
February'2020									
1	SPM	379	402	448	337				
2	PM10	55.20	58.66	68.40	55.54				
3	PM2.5	39.10	44.45	49.81	41.74				
4	SO2	24.60	25.80	24.60	23.25				
5	NOX	20.68	22.29	23.14	24.84				
6	CO	633	708	723	575				

6	CO	633	708	723	575	
March'2020						
1	SPM	385	413	462	375	
2	PM10	56.40	60.40	69.40	56.50	
3	PM2.5	40.20	45.10	50.10	42.80	
4	SO2	24.20	26.40	24.80	25.50	
5	NOX	26.40	24.80	24..8	24.90	
6	CO	683	803	586	780	
Six monthly Average						
1	SPM	363.6	387.9	428.3	362.4	
2	PM10	51.7	54.9	64.3	54.2	
3	PM2.5	36.8	40.4	44.5	40.0	
4	SO2	22.5	24.7	22.3	21.0	
5	NOX	24.6	24.0	24.4	24.8	
6	CO	661.4	753.3	719.6	654.2	

J.K. Cement WORKS, MANGROL (RAJ)

Fugitive Emission Monitoring Report

(October' 2019 - March' 2020)

(ALL VALUES IN MICROGRAMS / CUBIC METER)

Month/Year	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
NEAR COAL YARD OF 25 MW CPP	286.9	319.4	352.8	344.4	409.8	429.7

Signature

J.K. Cement WORKS, MANGROL (RA) (Unit-3)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE

October'19 to March'20

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M2)	STACK GASES TEMP. (° K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec.)	DUST CONC. (MG/NM ³)	MEAN DUST CONC. (MG/NM ³)	EMISSION RATE (Ts/DAY)	REMARK
	October'19								
Oct-19	KILN No.3 BAG HOUSE				PLANT NOT START				
	November'19								
Nov-19	KILN No.3 BAG HOUSE				PLANT NOT START				
	December'19								
Dec-19	KILN No.3 BAG HOUSE				PLANT NOT START				
	January'20								
3-Jan-20	KILN No.3 BAG HOUSE	12.56	435	19.46	167.44	9.3	9.0	0.135	
10-Jan-20	KILN No.3 BAG HOUSE	12.56	440	18.77	159.67	8.7		0.120	
17-Jan-20	KILN No.3 BAG HOUSE	12.56	437	19.89	170.36	9.0		0.132	
24-Jan-20	KILN No.3 BAG HOUSE	STOP							
	February'20								
8-Feb-20	KILN No.3 BAG HOUSE	12.56	431	19.24	167.08	11.0	10.2	0.159	
15-Feb-20	KILN No.3 BAG HOUSE	12.56	434	19.48	168.00	10.1		0.147	
22-Feb-20	KILN No.3 BAG HOUSE	12.56	437	19.24	164.79	8.5		0.121	
29-Feb-20	KILN No.3 BAG HOUSE	12.56	432	18.65	161.58	11.2		0.156	
	March'20								
4-Mar-20	KILN No.3 BAG HOUSE	12.56	429	18.63	162.54	11.2	9.8	0.157	
11-Mar-20	KILN No.3 BAG HOUSE	12.56	431	18.89	164.04	9.7		0.137	
18-Mar-20	KILN No.3 BAG HOUSE	12.56	427	18.45	161.72	8.5		0.119	
25-Mar-20	KILN No.3 BAG HOUSE	STOP							STOP

G. N. Singh

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Don G. G.

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John D. Smith

J.K. Cement WORKS, Mangrol (RAJ)
10 MW WASTE HEAT RECOVERY PLANT
 Outlet of Waste heat recovery plant
(October' 2019 - March' 2020)

MONTH/ PARAMETRS	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Total Suspended Solids (TSS) (Mg/l)	49.00	52.00	<2.5	56.00	33.00	62.00
Oil & Grease (Mg/l)	<1.4	<1.2	<3.0	<1.6	<3.0	<1.2
Total Residual Chlorine (Mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
Phosphate (Mg/l)	1.10	1.25	0.19	1.10	1.10	1.20
Free available chlorine (Mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
pH Value	7.50	7.50	6.56	7.85	6.56	7.10
Temperature	4°C Higher then the intake water	4°C Higher then the intake water	4°C Higher then the intake water temperature	4°C Higher then the intake water	4°C Higher then the intake water	4°C Higher then the intake water
Copper as (Cu) (Mg/l)	<0.2	<0.2	<0.2	<0.2	<0.02	<0.02
Zinc (as Zn) (Mg/l)	<0.01	<0.02	<0.02	<0.02	<0.02	<0.04
Iron (Total) (Mg/l)	0.65	0.45	0.09	0.3	0.87	0.2
Chromium (total) (Mg/l)	0.05	0.03	<0.01	0.05	<0.01	0.04
BOD (Mg/l)	7.6	7.9	<2.0	8.1	< 2.0	10.2
COD (Mg/l)	29.00	34.0	5.2	38.0	6.40	40.6

Signature

**J.K. Cement WORKS, Mangrol (RAJ)
25 MW THERMAL POWER PLANT**

Outlet of Power Plant

(October' 2019 - March' 2020)

PARAMETERS/MONTH	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Total Suspended Solids (TSS)	34	38	<2.5	35	24	28
Oil & Grease	<1.1	<1.3	<3.0	<1.1	<3.0	<1.0
Total Residual Chlorine	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
Free available chlorine	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH Value	7.65	7.30	6.62	7.45	6.72	7.30
Temperature	4°C higher than the intake water temperature	4°C higher than the intake water temperature	4°C higher than the intake water temperature	4 oC higher than the intake water temperature	4°C higher than the intake water temperature	4 oC higher than the intake water temperature
Copper as (Cu)	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02
Zinc (as Zn)	<0.02	<0.02	<0.02	<0.02	0.2	<0.01
Iron (Total)	0.10	0.20	0.07	0.20	1.10	0.30
Chromium (total)	0.006	0.004	<0.01	0.006	<0.01	0.006
BOD	8.20	9.10	<2.0	8.60	3.20	10.50
COD	42.0	46.0	<4.0	43.0	17.0	46.0
Phosphate	1.25	1.10	0.17	1.25	0.44	1.40

J.K. Cement WORKS, Mangrol (RAJ)

25 MW THERMAL POWER PLANT

Stack monitoring results (October' 2019 - March' 2020)

Location/Month	SPM (Mg/Nm3)				
	Oct-19	Nov-19	Dec-19	Jan-20	Mar-20
Stack attached with Boiler	12.0	14.0	29.0	12.0	26.2
Stack attached with Coal Crusher	10.0	20.0	21.0	10.0	14.3

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J.K. Cement WORKS, MANGROL (RAJ)

Noise Monitoring Report

(October 2019 - March 2020)

(ALL VALUES IN dB)

Month	25 MW CPP		10 MW WHR	
	Day	Night	Day	Night
Oct-19	72.1	62.1	69.2	59.2
Nov-19	70.8	60.7	68.7	58.8
Dec-19	71.8	61.6	68.4	58.2
Jan-20	70.6	61.2	69.5	59.9
Feb-20	70.4	60.8	68.7	58.4
Mar-20	64.8	54.6	59.4	51.4

Signature

J.K. Cement Works, Mangrol (Unit-2)
Fugitive Emission Monitoring Report
(October' 2019 -March' 2020)

S.No.	Month/Year	SPM ($\mu\text{g}/\text{m}^3$)			
		NEAR COAL YARD-2	NEAR LIMESTONE CRUSHING SITE 2	NEAR STACKER RECLAIMER-2	NEAR GYPSUM YARD-2
1	Oct-19	1103.6	1126.8	1120.4	1133.1
2	Nov-19	1122.1	1042.7	861.2	1281.1
3	Dec-19	1052.1	1110.3	1116.9	1107.5
4	Jan-20	1022.9	985.8	1015.2	1042.3
5	Feb-20	995.0	1007.0	1069.0	972.0
6	Mar-20	1078.0	1188.0	1242.0	1090.0

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J.K. Cement Works, Mangrol (Unit-3)
Fugitive Emission Monitoring Report
(October' 2019 -March' 2020)

S.No.	Month/Year	SPM ($\mu\text{g}/\text{m}^3$)		
		NEAR COAL YARD-3	NEAR LIMESTONE CRUSHING SITE 3	NEAR STACKER RECLAIMER-3
1	Oct-19	PLANT NOT START		
2	Nov-19	PLANT NOT START		
3	Dec-19	PLANT NOT START		
4	Jan-20	958.0	1248.0	1295.0
5	Feb-20	843.0	1175.0	1214.0
6	Mar-20	989.0	1365.0	1312.0
				940.0
				879.0
				922.0

(Signature)

J.K. Cement Works, Mangrol (Unit-1)
Fugitive Emission Monitoring Report
October' 2019 - March' 2020

S.No.	Month/Year	SPM ($\mu\text{g}/\text{m}^3$)			
		NEAR COAL YARD-1	NEAR LIMESTONE CRUSHING SITE- 1	NEAR STACKER RECLAIMER-1	NEAR GYPSUM YARD-1
1	Oct-19	1216.2	1189.2	1149.1	987.8
2	Nov-19	1166.4	985.1	1208.2	998.8
3	Dec-19	905.0	1098.5	1102.8	972.6
4	Jan-20	995.0	1007.8	1066.0	1088.5
5	Feb-20	1082.0	1142.0	1110.0	1105.0
6	Mar-20	1176.0	1292.0	1324.0	1190.0

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J.K. Cement WORKS, MANGROL (RAJ) (Unit-2)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
October'19 to March'20

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M2)	STACK GASES TEMP. (° K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec.)	DUST CONC. (Mg/NM ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSION RATE (Ts/DAY)	REMARK
	October'19								
10-Oct-19	KILN + RAW MILL (B.F.)	14.18	412	15.31	157.03	13.0	11.8	0.176	
17-Oct-19	KILN + RAW MILL (B.F.)	14.18	415	15.83	161.19	10.6		0.148	
24-Oct-19	KILN + RAW MILL (B.F.)	14.18	417	15.45	156.56	11.6		0.157	
31-Oct-19	KILN + RAW MILL (B.F.)	14.18	411	14.65	150.62	11.8		0.154	
	November'19								
1-Nov-19	KILN + RAW MILL (B.F.)	14.18	329	12.58	9.81	9.60	13.6	0.008	
8-Nov-19	KILN + RAW MILL (B.F.)	14.18	330	12.85	9.95	7.8		0.007	
15-Nov-19	KILN + RAW MILL (B.F.)	14.18	325	12.60	9.79	10.3		0.009	
19-Nov-19	KILN + RAW MILL (B.F.)	14.18			STOP			STOP	
	December'19								
5-Dec-19	KILN + RAW MILL (B.F.)	14.18	416	15.69	159.38	9.2	10.9	0.127	
12-Dec-19	KILN + RAW MILL (B.F.)	14.18	418	15.15	153.15	10.1		0.134	
19-Dec-19	KILN + RAW MILL (B.F.)	14.18	414	14.92	152.29	11.7		0.154	
26-Dec-19	KILN + RAW MILL (B.F.)	14.18	412	15.87	162.77	12.5		0.176	
	January'20								
1-Jan-20	KILN + RAW MILL (B.F.)	14.18	418	16.19	163.67	8.1	9.9	0.115	
8-Jan-20	KILN + RAW MILL (B.F.)	14.18	415	15.93	162.20	8.4		0.118	
15-Jan-20	KILN + RAW MILL (B.F.)	14.18	421	15.42	154.77	10.2		0.136	
20-Jan-20	KILN + RAW MILL (B.F.)	14.18	416	14.96	151.96	12.9		0.169	

Signature

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February'20									
5-Feb-20	KILN + RAW MILL (B.F.)	14.18	416.0	15.43	156.73	14.1	12.3	0.191	
12-Feb-20	KILN + RAW MILL (B.F.)	14.18	419.0	15.59	157.23	10.8		0.147	
19-Feb-20	KILN + RAW MILL (B.F.)	14.18	423.0	15.88	158.64	12.6		0.173	
26-Feb-20	KILN + RAW MILL (B.F.)	14.18	421.0	15.21	152.67	11.5		0.152	
March'20									
2-Mar-20	KILN + RAW MILL (B.F.)	14.18	421	15.58	156.38	9.9	11.5	0.134	
9-Mar-20	KILN + RAW MILL (B.F.)	14.18	425	15.81	157.19	10.5		0.143	
16-Mar-20	KILN + RAW MILL (B.F.)	14.18	420	15.40	154.94	14.1		0.189	
23-Mar-20	KILN + RAW MILL (B.F.)	STOP						STOP	
October'19									
10-Oct-19	CLINKER COOLER (ESP)	8.80	427	13.17	113.98	19.8	17.2	0.195	
17-Oct-19	CLINKER COOLER (ESP)	8.80	424	12.48	106.95	17.5		0.162	
24-Oct-19	CLINKER COOLER (ESP)	8.80	426	12.04	103.52	16.6		0.148	
31-Oct-19	CLINKER COOLER (ESP)	8.80	425	12.95	111.71	15.0		0.145	
November'19									
1-Nov-19	CLINKER COOLER (ESP)	8.80	424	12.35	107.24	13.20	12.2	0.122	
8-Nov-19	CLINKER COOLER (ESP)	8.80	429	13.39	115.89	16.1		0.161	
15-Nov-19	CLINKER COOLER (ESP)	8.80	426	11.55	100.63	11.1		0.097	
19-Nov-19	CLINKER COOLER (ESP)	8.80	422	13.46	116.88	8.5		0.086	
December'19									
5-Dec-19	CLINKER COOLER (ESP)	8.80	430	13.59	123.32	12.9	14.4	0.137	
12-Dec-19	CLINKER COOLER (ESP)	8.80	426	12.38	111.18	14.6		0.140	
19-Dec-19	CLINKER COOLER (ESP)	8.80	425	11.89	108.27	15.9		0.149	
26-Dec-19	CLINKER COOLER (ESP)	8.80	427	13.36	120.81	14.0		0.146	

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J.K. Cement WORKS, MANGROL (RAJ) (Unit-1)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
October' 2019 - March' 2020

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M ²)	STACK GASES TEMP. (° K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec.)	DUST CONC. (Mg/NM ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSION RATE (Ts/DAY)	REMARK
	October'2019								
7-Oct-19	KILN + RAW MILL (BH)	5.23	408	15.84	60.51	13.4	13.2	0.070	
14-Oct-19	KILN + RAW MILL (BH)	5.23	415	16.51	62.00	13.6		0.073	
21-Oct-19	KILN + RAW MILL (BH)	5.23	414	15.85	59.67	12.3		0.063	
28-Oct-19	KILN + RAW MILL (BH)	5.23	418	17.14	63.91	13.4		0.074	
	November'2019								
4-Nov-19	KILN + RAW MILL (BH)	5.23	414	15.91	59.89	11.3	12.8	0.058	
11-Nov-19	KILN + RAW MILL (BH)	5.23	412	16.41	62.08	15.7		0.084	
18-Nov-19	KILN + RAW MILL (BH)	5.23	416	15.43	57.81	11.5		0.057	
25-Nov-19	KILN + RAW MILL (BH)	5.23	420	16.91	62.75	12.6		0.068	
	December'2019								
2-Dec-19	KILN + RAW MILL (BH)	5.23	412	15.72	59.47	11.6	11.2	0.060	
9-Dec-19	KILN + RAW MILL (BH)	5.23	418	16.29	60.74	14.6		0.077	
16-Dec-19	KILN + RAW MILL (BH)	5.23	416	16.59	62.15	8.9		0.048	
23-Dec-19	KILN + RAW MILL (BH)	5.23	420	15.66	58.11	9.7		0.049	
	January' 2020								
6-Jan-20	KILN + RAW MILL (BH)	5.23	411	17.01	64.50	8.4	10.6	0.047	
13-Jan-20	KILN + RAW MILL (BH)	5.23	413	15.94	60.15	12.1		0.063	
20-Jan-20	KILN + RAW MILL (BH)	5.23	408	16.57	63.30	10.4		0.057	
27-Jan-20	KILN + RAW MILL (BH)	5.23	415	16.42	61.67	11.5		0.061	
	February' 2020								
3-Feb-20	KILN + RAW MILL (BH)	5.23	415	16.42	61.67	9.7	8.5	0.052	
11-Feb-20	KILN + RAW MILL (BH)	5.23	417	16.76	62.64	8.6		0.047	
17-Feb-20	KILN + RAW MILL (BH)	5.23	414	17.21	64.79	7.3		0.041	
24-Feb-20	KILN + RAW MILL (BH)			STOP					

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Erhard

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John C. C. C.

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J.K. Cement WORKS, MANGROL (RAJ)
AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON
FOR UNIT-1, 2 & 3
(ALL VALUES IN MICROGRAMS / CUBIC METER)
(October' 2019 - March' 2020)

S.No. & Month	LOCATION / PARAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR FACTORY GATE	NEAR COLONY GATE	Remarks
October'2019						
1	SPM	335	362	392	380	
2	PM10	46.50	48.92	58.40	52.57	
3	PM2.5	30.58	34.87	38.63	36.48	
4	SO2	18.30	22.81	20.29	15.89	
5	NOX	26.52	23.51	24.15	25.49	
6	CO	703	696	728	729	
November'2019						
1	SPM	348	370	410	387	
2	PM10	48.20	49.36	62.20	52.81	
3	PM2.5	31.12	36.48	41.31	37.55	
4	SO2	20.20	22.20	19.90	18.82	
5	NOX	25.70	25.53	26.22	24.06	
6	CO	565	654	856	697	
December'2019						
1	SPM	372	385	422	375	
2	PM10	52.80	55.90	65.50	53.40	
3	PM2.5	40.60	42.20	44.40	40.20	
4	SO2	22.60	24.20	20.80	20.40	
5	NOX	24.90	26.20	25.50	25.10	
6	CO	728	856	697	565	

Signature

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January'2020									
1	SPM	363	396	436	320				
2	PM10	50.95	56.24	61.78	54.16				
3	PM2.5	38.95	39.27	42.76	41.31				
4	SO2	25.20	26.50	23.20	21.97				
5	NOX	23.63	21.87	22.82	24.32				
6	CO	657	803	729	579				
February'2020									
1	SPM	379	402	448	337				
2	PM10	55.20	58.66	68.40	55.54				
3	PM2.5	39.10	44.45	49.81	41.74				
4	SO2	24.60	25.80	24.60	23.25				
5	NOX	20.68	22.29	23.14	24.84				
6	CO	633	708	723	575				
March'2020									
1	SPM	385	413	462	375				
2	PM10	56.40	60.40	69.40	56.50				
3	PM2.5	40.20	45.10	50.10	42.80				
4	SO2	24.20	26.40	24.80	25.50				
5	NOX	26.40	24.80	24.8	24.90				
6	CO	683	803	586	780				
Six monthly Average									
1	SPM	363.6	387.9	428.3	362.4				
2	PM10	51.7	54.9	64.3	54.2				
3	PM2.5	36.8	24.7	22.3	21.0				
4	SO2	22.5	24.7	22.3	21.0				
5	NOX	24.6	24.0	24.4	24.8				
6	CO	661.4	753.3	719.6	654.2				

J.K. Cement WORKS, Mangrol (RAJ)

Noise Monitoring Report

Month	Mangrol Plant FY 2019-20 (Unit - 1, 2 & 3)							
	Near Time office		Near Thermal Power Plant		Near Raw material Gate		Near Packing Plant Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
Oct-19								
Nov-19	68.4	58.6	67.7	58.7	68.7	57.4	70.8	61.1
Dec-19	67.9	58.5	68.4	58.9	69.6	58.9	71.6	61.5
Jan-20	68.7	59.2	68.9	59.2	70.2	59.4	70.9	60.8
Feb-20	67.4	58.4	69.2	59.6	70.8	58.5	71.2	61.2
Mar-20	66.2	54.6	66.7	54.8	65.6	52.4	66.9	51.2

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L.K. Cement WORKS, Mangrol (RAJ)
Treated Domestic Effluent Analysis Report

October' 2019 - March' 2020

S.No.	PARAMETER	Standards	October-19	November-19	December-19	January-20	February-20	March-20
1	pH	Between 5.5 to 9.0	6.68	7.24	6.84	6.8	6.5	6.9
2	Chlorides as Cl	Not to exceed 1000 mg/l	98	68	108	100.0	91.0	78.2
3	Total Suspended solids	Not to exceed 100 mg/l	10	<2.5	<2.5	5.0	<2.5	3.8
4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.3	<2.0	<2.0	<2.0	<2.0	<2.0
5	Chemical Oxygen Demand	Not to exceed 250 mg/l	19	7.2	5.6	4.4	<4.0	15.2
6	Oil & Grease	Not to exceed 10 mg/l	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
7	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.2	<0.1	<0.1	<0.1	<0.1	<0.1
8	Sulphide (as S)	Not to exceed 2.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
9	Total Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/1875

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00523

Sample Description : Ambient Air

Sampling Location : Near Time Office

Date of Sampling : 13/14.02.2020

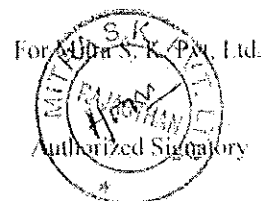
Reference No.& Date : e-mail dttd: 23.04.2019

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	56	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	32	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	26.6	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.6	IS 5182 :(Part-10) :1999

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

Report Prepared By



Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/1876

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00524

Sample Description : Ambient Air

Sampling Location : Near Thermal Power Plant

Date of Sampling : 13/14.02.2020

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

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	76	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	48	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	8.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	31.4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.76	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.



Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/1877

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00525

Sample Description : Ambient Air

Sampling Location : Near Colony Gate

Date of Sampling : 13/14.02.2020

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

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	60	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	38	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	28.4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.58	IS 5182 :(Part-10) :1999

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

Report Prepared By

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, Mangrol
Distt, Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1878

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00526

Sample Description : Ambient Air

Sampling Location : Near Factory Gate

Date of Sampling : 13/14.02.2020

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

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	64	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	40	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	27.6	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.70	IS 5182 :(Part-10) :1999

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

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1879

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00520

Sample Description : Stack Emission

Date & Time of Sampling: 11.02.2020 at 10.00 a.m

Sampling Location : Kiln & Raw mill stack (Line – I)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|-----------------------------------|
| 1. Stack connected to | : Kiln & Raw mill |
| 2. Emission due to | : Burning of Limestone & additive |
| 3. Material of construction of Stack | : Mild Steel |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 88.3 m |
| 2. Diameter of the Stack at sampling point | : 2.58 m |
| 3. Area of Stack | : 5.23 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 150	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 16.50	EPA Part 2
4. Concentration of Sulphur di oxide (mg/Nm ³)	: 16.20	EPA Part-6
5. Concentration of Nitrogen di oxide (mg/Nm ³)	: 564.0	EPA Part-7
6. Concentration of Particulate Matters (mg/Nm ³)	: 13.0	EPA Part-5

D. Pollution control device

Details of pollution control devices attached with the stack : Bag House

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1880

Date : 20.03.2020

Sample No. : MSKGI/ED/2019-20/03/00521

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2020 at 09.00 a.m

Sampling Location : Kiln & Raw mill stack (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|-----------------------------------|
| 1. Stack connected to | : Kiln & Raw mill |
| 2. Emission due to | : Burning of Limestone & additive |
| 3. Material of construction of Stack | : Mild Steel |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 145.1 m |
| 2. Diameter of the Stack at sampling point | : 4.25 m |
| 3. Area of Stack | : 14.19 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 148	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 18.81	EPA Part 2
4. Concentration of Sulphur di oxide (mg/Nm ³)	: 17.64	EPA Part-6
5. Concentration of Nitrogen di oxide (mg/Nm ³)	: 630.20	EPA Part-7
6. Concentration of Particulate Matters (mg/Nm ³)	: 16.0	EPA Part-5

D. Pollution control device

Details of pollution control devices attached with the stack : Bag House

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1881

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00522

Sample Description : Stack Emission

Date & Time of Sampling: 13.02.2020 at 09.30 a.m

Sampling Location : Kiln & Raw mill stack (Line – 3)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|-----------------------------------|
| 1. Stack connected to | : Kiln & Raw mill |
| 2. Emission due to | : Burning of Limestone & additive |
| 3. Material of construction of Stack | : Mild Steel |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 145.1 m |
| 2. Diameter of the Stack at sampling point | : 4.25 m |
| 3. Area of Stack | : 14.19 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 130	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 17.82	EPA Part 2
4. Concentration of Sulphur di oxide (mg/Nm ³)	: 19.86	EPA Part-6
5. Concentration of Nitrogen di oxide (mg/Nm ³)	: 415	EPA Part-7
6. Concentration of Particulate Matters (mg/Nm ³)	: 14.0	EPA Part-5

D. Pollution control device

Details of pollution control devices attached with the stack : Bag House

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1882

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00677

Sample Description : Stack Emission

Date & Time of Sampling: 11.02.2020 at 11.20 A.M

Sampling Location : Coal Mill (Line - 1)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|--------------------|
| 1. Stack connected to | : Coal mill |
| 2. Emission due to | : Grinding of coal |
| 3. Material of construction of Stack | : Mild Steel |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 30 m |
| 2. Diameter of the Stack at sampling point | : 0.76 m |
| 3. Area of Stack | : 0.453 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|---------|------------|
| 1. Temperature of emission (°C) | : 72 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 735 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 16.84 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 14.0 | EPA Part-5 |

D. Pollution control device

- | | |
|--|--------------|
| Details of pollution control devices attached with the stack | : Bag filter |
|--|--------------|

E. Remarks : NIL

Report Prepared by :



Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1883

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00678

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2020 at 11.00 A.M

Sampling Location : Coal Mill (Line – 2)

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	:	Coal mill
2. Emission due to	:	Grinding of coal
3. Material of construction of Stack	:	Mild Steel
4. Shape of Stack	:	Circular
5. Whether Stack is provided with permanent platform & ladder	:	Yes
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	:	53 m
2. Diameter of the Stack at sampling point	:	1.6 m
3. Area of Stack	:	2.01 m ²
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	:	70 EPA Part 2
2. Barometric pressure (mm of Hg)	:	735 EPA Part 2
3. Velocity of gas (m/sec)	:	17.0 EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	:	16.0 EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack	:	Bag filter
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1884

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00679

Sample Description : Stack Emission

Date & Time of Sampling: 13.02.2020 at 11.00 A.M

Sampling Location : Coal Mill (Line - 3)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Coal mill	
2. Emission due to	: Grinding of coal	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 53 m	
2. Diameter of the Stack at sampling point	: 1.6 m	
3. Area of Stack	: 2.01 m ²	
C. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 68	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 16.0	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 18.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack		: Bag filter
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1885

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00680

Sample Description : Stack Emission

Date & Time of Sampling: 11.02.2020 at 12.20 P.M

Sampling Location : Clinker Cooler (Line - 1)

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	: Clinker cooler	
2. Emission due to	: Clinker Hot gases	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
<u>B. Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 40.0 m	
2. Diameter of the Stack at sampling point	: 3.0 m	
3. Area of Stack	: 7.07 m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 112	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 8.0	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 21.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack		: Electrostatic Precipitator
E. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1886

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00681

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2020 at 12.30 P.M

Sampling Location : Clinker Cooler (Line - 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Clinker cooler	
2. Emission due to	: Clinker Hot gases	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 48.9 m	
2. Diameter of the Stack at sampling point	: 3.35 m	
3. Area of Stack	: 8.81 m ²	
C. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 114	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 9.20	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 18.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Electrostatic Precipitator	
E. Remarks : NIL		

Report Prepared by:

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
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CIN: U51909WB1956PTC023037

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1887

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00682

Sample Description : Stack Emission

Date & Time of Sampling: 13.02.2020 at 12.30 P.M

Sampling Location : Clinker Cooler (Line – 3)

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	:	Clinker cooler
2.Emission due to	:	Clinker Hot gases
3.Material of construction of Stack	:	Mild Steel
4.Shape of Stack	:	Circular
5.Whether Stack is provided with permanent platform & ladder	:	Yes
B. <u>Physical characteristics of stack</u>		
1.Height of the stack from ground level	:	48.9 m
2.Diameter of the Stack at sampling point	:	3.35 m
3.Area of Stack	:	8.81 m ²
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1.Temperature of emission (°C)	:	116 EPA Part 2
2.Barometric pressure (mm of Hg)	:	735 EPA Part 2
3.Velocity of gas (m/sec)	:	8.40 EPA Part 2
4.Concentration of Particulate Matters (mg/Nm ³)	:	20.0 EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack		: Electrostatic Precipitator
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1888

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00683

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2020 at 01.30 p.m

Sampling Location : Cement Mill 2 (Line - 1)

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of Clinker & Gypsum	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 0.80 m	
3. Area of Stack	: 0.502 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 90	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 9.40	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 15.50	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack		: Bag filter
E. Remarks : NIL		

Report Prepared by:

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1889

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00684

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2020 at 02.30 p.m

Sampling Location : Cement Mill 3 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of Clinker & Gypsum	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 56.0 m	
2. Diameter of the Stack at sampling point	: 2.9 m	
3. Area of Stack	: 6.60. m ²	
C. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 92	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 10.86	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 16.40	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1890

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00685

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2020 at 03.30 p.m

Sampling Location : Cement Mill 3 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of Clinker & Gypsum	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 56.0 m	
2. Diameter of the Stack at sampling point	: 2.9 m	
3. Area of Stack	: 6.60. m ²	
C. Results of sampling & analysis of gaseous emission	Result	Method
1. Temperature of emission (°C)	: 93	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 11.66	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 18.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited
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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1891

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00686

Sample Description : Stack Emission

Date & Time of Sampling: 14.02.2020 at 09.30 a.m

Sampling Location : Packer 1 (Line – 2)

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Packer 1	
2. Emission due to	: NA	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 1.0 m	
3. Area of Stack	: 0.7857 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Concentration of Particulate Matters (mg/Nm ³)	: 12.0	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack		: Bag Filter
E. Remarks : NIL		

Report Prepared by :



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1892

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00687

Sample Description : Stack Emission

Date & Time of Sampling: 14.02.2020 at 10.30 A.M

Sampling Location : Packer 2 (Line - 2)

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Packer 2	
2. Emission due to	: NA	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 1.0 m	
3. Area of Stack	: 0.7857 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Concentration of Particulate Matters (mg/Nm ³)	: 13.0	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1893

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00688

Sample Description : Stack Emission

Date & Time of Sampling: 14.02.2020 at 11.30 a.m

Sampling Location : Packer 3 (Line - 2)

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	:	Packer 3
2. Emission due to	:	NA
3. Material of construction of Stack	:	MS
4. Shape of Stack	:	Circular
5. Whether Stack is provided with permanent platform & ladder	:	Yes
<u>B. Physical characteristics of stack</u>		
1. Height of the stack from ground level	:	30.0 m
2. Diameter of the Stack at sampling point	:	1.0 m
3. Area of Stack	:	0.7857 m ²
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Concentration of Particulate Matters (mg/Nm ³)	: 10.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack	:	Bag Filter
E. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1894

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00689

Sample Description : Stack Emission

Date & Time of Sampling: 14.02.2020 at 12.30 P.M

Sampling Location : Packer 4 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Packer 4	
2. Emission due to	: NA	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 1.0 m	
3. Area of Stack	: 0.7857 m ²	
C. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Concentration of Particulate Matters (mg/Nm ³)	: 14.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1895

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00690

Sample Description : Stack Emission

Date & Time of Sampling: 11.02.2020 at 02.00 p.m

Sampling Location : Limestone Crusher (Line - 1)

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	: Limestone Crusher	
2. Emission due to	: Limestone crushing	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
<u>B. Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30 m	
2. Diameter of the Stack at sampling point	: 0.7 m	
3. Area of Stack	: 0.385 m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 32	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 15.40	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 20.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1896

Date : 20.03.2020

Sample No. : MSKGL/ED/2019-20/03/00691

Sample Description : Stack Emission

Date & Time of Sampling: 14.02.2020 at 03.00 P.M

Sampling Location : Limestone Crusher (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|----------------------|
| 1. Stack connected to | : Limestone Crusher |
| 2. Emission due to | : Limestone crushing |
| 3. Material of construction of Stack | : Mild Steel |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 30 m |
| 2. Diameter of the Stack at sampling point | : 0.40 m |
| 3. Area of Stack | : 1.23 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 30 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 735 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 16.20 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 19.0 | EPA Part-5 |

D. Pollution control device

Details of pollution control devices attached with the stack : Bag Filter

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited.

Authorised Signatory

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TEST REPORT

Name & Address of the Customer :
J.K. Cement Works, Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/1897
Date : 20.03.2020
Sample No. : MSKGL/ED/2019-20/03/00692 to 00695
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.	13/14.02.2020	Near Packing Plant Gate (Mangrol Plant)	58.0	42.0
2.		Near Time Office (Mangrol Plant)	56.4	41.3
3.		Near Thermal Power Plant (Mangrol Plant)	69.1	44.8
4.		Near Raw Material gate (Mangrol Plant)	62.6	42.7
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

Authorised Signatory

