JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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: 26.11.2020

To,
The Director,
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 Apr' 2019 to Sept' 2020**. As per MoEF & CC notification no. S.O. 5845 (E) 26.11.2018 the same soft copy has been send to email id. rocz.lko-mef@nic.in, moef@nic.in, m_env@rediffmail.com, ccb.cpcb@nic.in, member-secretary@rpcb.nic.in, cpcb.bhopal@gmail.com 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

Anil Kumar Jain
Sr. General Manager (Environment)

Encl: a/a
Copy to:

1.The Director, Ministry of Environment and Forests,_Regional office (Central Region), Kendriya Bhawan, 5th Floor, Sector 'H' , ALIGANJ, LUCKNOW- 226020 (U.P.)
2.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.)
3.The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, New Delhi 110032
4. The Chairman, Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, JAIPUR - 302004 (RAJASTHAN)

HALF YEARLY COMPLIANCE REPORT

OF

ENVIRONMENTAL CLEARANCE LETTER NO.

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

Period: April-20 to September-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)

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 up to 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 up to 31.03.2022.
- CTO for Township along with Sewage Treatment plant vide letter No.: G (CPM) / Chittorgarh (Nimbahera)/11(1)/2018-2019/ 2727-2729. Order No. 2019-2020/CPM/5562 dated 07.11.2019, valid up to 31/07/2023.

- CTO for 29.1 MW Waste Heat Recovery Plant vide letter no F(CPM)/CHITTORGARH(NIMBAHERA)/11(1)/2018-2019/4400-4402, Order no. 2019-2020/CPM/5599 Dated 04/02/2020, valid up to 30/09/2024.

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, Four nos. Continuous Air Quality Monitoring Station (CAAQMS) has installed at periphery of the plant for ambient air quality monitoring and data are being submitted to ministry & Regional office on half yearly basis and also real time data uploading at CPCB/RPCB web portal on regularly. **Photographs of CAAQMS:**  
(ii)	The Standard issued by the Ministry vide G.S.R. No. 612 (E) dated 25th	Complying with.

	August, 2014 and subsequent amendment dated 9th May, 2016 and 10th May,2016 regarding cement plant with respect to particulate matter, SO_2 and NO_X shall be followed.	For achieving the new emission standard as per G.S.R. no. 612 (E) dated 25th August, 2014 & subsequent amendment dated 9th May, 2016 and 10th May, 2016 for our existing plant Line – 1, 2 & 3 by adopting latest technology & high efficient pollution equipments and SNCR system installed for control the NOX emission. **Photographs of SNCR:**   Stack emission monitoring report for the period April-20 to Sept-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.	Complying with, Continuous emission monitoring system have been installed for monitoring of PM, SO2 and NOx at the stack of all Kiln Bag house, Boiler ESP and Opacity meters have been installed for continuous monitoring of PM at the stack of coal mill, cement mill and clinker cooler & real time data are being uploading regularly on SPCB & RSPCB web portal. Monitoring equipmnts calibrated on quarterly basis. **Photographs of Continuous Stack Emission Monitoring System**  

		 
(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.	All suitable measures like VFD, high efficient motors have been adopted to reduce power consumption.

(v)	The National Air Quality Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16th 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 emissions well below prescribed standards.	Complying with, Ambient air quality monitoring report by NABL accredited lab enclosed as **Annexure-II.**
(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.	Complying with, To control the secondary fugitive emissions, bag filter installed at material transfer point and encloser at hopper, water spray system, covered shed and storage silo for intermediate & finished product **Photographs of control measures for fugitive emission:** Raw material belt conveyor covered with metal sheet 

		Bag filters installed at material transfer point  Raw meal storage in CF silo  Clinker Storage Silo

		
(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 green belt and the quantum of equivalent CO2 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 CO2 emissions : 1. Increase the green power generation from waste heat of cement plant by Waste Heat recovery Boiler. 2. For reduction of mineral consumption, increase the PPC production. 3. For reduction of fossil fuel consumption, Hazardous & others waste are being co-processed as a AFR. 4. Dense green belt are developed in 53.67 hect. area in & around the plant & colony.
(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	Arsenic and mercury monitoring in emissions, ambient air & water is being

	water.	carried out by MOEF&CC recognised lab.
(xi)	The coal yard shall be lined and covered.	Complying with, Coal are being storage in covered storage yard. 
(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, There is no Wildlife Sanctuary, National Park, within 10 Km periphery of the lease area. The same has been authenticated by Deputy Conservator of forest Chittorgarh vide letter no. AF () survey/UVS/2020-21/6048 dated 23.09.2020. Copy enclosed as **Annexure-III**.
(xiii)	The project proponent shall take all precautionary measures for conservation and 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.	Complying with, The Wildlife conservation plan has been prepared for six nos. of the following Schedule-I species found in the buffer area during the survey: Pavocristatus (Indian Peafowl), Panthera padus fusca (Indian Leopard), Prionailurus rubiginosus (Rusty-Spotted Cat), Canis lupus pallipes (Indian Wolf), Varanus bengalensis (Indian Monitor Lizard) & Gyps indicus/Gyps bengalensis (Indian Vulture)

		The DFO, Chittorgarh has approved and forwarded conservation plan to the Chief Conservator of Forest (Wildlife), Udaipur who has further approved and forwarded the same Wildlife Conservation Plan to the Additional Principal Conservator of Forest vide letter no. f 5()forest conservation/ Principal conservator of Forest/ 2020-21/ 5002 dated 24.09.2020 for final approval. Copy is enclosed as **Annexure-IV.**
(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 dated 30/05/2020 & soft copy send by email on dated 30/05/2020 for the period from Oct-2019 to March-2020.
(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. **Photograph of railway loading** 

(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.	Complying with, For reduce the water consumption, unit has already installed air cooled condensers in captive power plant & WHRS. For maintain ZERO LIQUID DISCHARGE UNIT',100% treated water of WHRS & CPP are being utilization in cement plant for cooling purpose & dust suppression. **Photographs of WHRS system**  **Air Cooled Condensers at CPP** 

		Air Cooled Condensers at WHRS 
(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.	Complying with, Our unit has taken various step on water harvesting and conservation through plant optimization and taking up various support programme in and around our unit under CSR initiative also. Total 16 nos. artificial rain water harvesting structures (Injection well) & 01 Nos. artificial pond constructed in our plant, Colony for recharge the ground water. Photographs of Rain water harvesting structure (Injection Well)

		 
(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.	Complying with, 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-V.**
(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 cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers/ re-processors only.	Complying with, Raw mill dust, coal dust, clinker dust and cement dust from Pollution control equipment like Bag house / ESP are being 100% recycled in cement plant. Photograph of air slide for recycle the cement ,clinker dust from Pollution Control devices:

		 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.	Complying with, For fuel & alternative fuel feeding system for hazardous waste like use of liquid semi liquid & solid and other wastes has installed. Photographs of liquid waste feeding system

Solid AFR feeding system

<table>
<tr><td></td><td></td><td> 
</td></tr>
<tr><td>(xxi)</td><td>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.</td><td>Complying with,

We are having a various hazardous waste / other waste permissions from CPCB / RSPCB to use as Alternative fuel & raw materials (AFR) in cement plant.</td></tr>
<tr><td>(xxii)</td><td>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.</td><td>Complying with, We are using various type of hazardous waste / other waste in kiln, and ARM in cement manufacturing with due permission obtained from CPCB / RSPCB.</td></tr>
<tr><td>(xxiii)</td><td>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.</td><td>Complying with We have achieved planation in 34.8 % area with planting of local species. Details are mention below table :
<table>
<tr><td rowspan="2">Sr. No.</td><td colspan="2">Greenbelt development (No. of Tree planted)</td><td rowspan="2">Total area Covered (In Hect.)</td></tr>
<tr><td>Upto 2019-20</td><td>Apr-20 to Sept-20</td></tr>
<tr><td>1</td><td>165651</td><td>1670</td><td>53.67</td></tr>
</table></td></tr>
</table>

Photographs of Plantation

		 
(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.	Complying with, Solar light system installed as per feasibility of area like street, parking area & mine office roof top area etc.

		
(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.
(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	Agreed & complied.

	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.	
(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.
GENERAL CONDITIONS		
(i)	The Project authorities must strictly adhere to the stipulation made by the Rajasthan Pollution Control Board and the State Government.	Complying with, Consent to Operate have been granted for Cement Plant L-1,L-2 ,L-3, Power Plant ,WHRS & Residential township by Rajasthan State Pollution Board ,Jaipur & Comply all conditions regularly.
(ii)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate	Complying with ,We will take prior approval of the Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion or

	Change (MoEFCC).	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 PM_{10}, $PM_{2.5}$, SO_2 and NOx 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.	Complying with, We have already installed 4 ambient air monitoring stations for PM 10, PM2.5, SO2 & NOx 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 enclosed as above **Annexure-I** & ambient air quality enclosed as above **Annexure-1I.**
(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).	Complying with, Silencer, acoustic hoods, enclosers 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 Apr-20 to Sept-20 are enclosed as **Annexure-VI**.
(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 water for utilization in the lean season besides recharging the ground water table.	Complying, We have already developed 16 nos. of injection well 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.	Complying with, 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. Following amount sent in various CSR activities in period of Apr-20 to Sept-20..

<table>
<tr><td></td><td></td><td>
<table>
<tr><th>Sr.No.</th><th>CSR activities</th><th>Amount (in Rs.)</th></tr>
<tr><td>1</td><td>Community Welfare-construction of Gravel roads in nearby villages</td><td>318463.48</td></tr>
<tr><td>2</td><td>Drinking Water Arrangement</td><td>108000</td></tr>
<tr><td>3</td><td>Health</td><td>1076471</td></tr>
<tr><td>4</td><td>Distribution of PPEs for prevention of Covid-19.</td><td>74200</td></tr>
<tr><td>5</td><td>Educational Charity</td><td>420007</td></tr>
<tr><td></td><td>Total</td><td>1997141.48</td></tr>
</table>
</td></tr>
<tr><td>(ix)</td><td>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.</td><td>Complying with.</td></tr>
<tr><td>(x)</td><td>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.</td><td>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</td></tr>
<tr><td>(xi)</td><td>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.</td><td>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.</td></tr>
<tr><td>(xii)</td><td>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</td><td>Complying with,
last EC compliance report submitted vide our letter no. MGR/PC/21/C13</td></tr>
</table>

S. No.	Condition	Status
	Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Lucknow/ CPCB/SPCB shall monitor the stipulated conditions.	dated 30/05/2020 & soft copy send by email on dated 30/05/2020 for the period from Oct-2019 to March-2020.
(xiii)	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 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 2019-20 has submitted vide letter no. MGR/PC/ESR/21/265 to 270 & 277 , Date: 15.09.2020 to the State Pollution Control Board and regional office of the MoEF& CC at Lucknow and uploaded at company website. Copy of ESR reports enclosed as **Annexure-VII.**
(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 sevendays 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 (I), Dated 08.03.2019

	General Conditions	
(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) (Unit-1)

DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE

April' 2020 - September' 2020

DATE/MONTH	NAME OF THE STACK / DUCT ATTECHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M2)	STACK GASES TEMP. (^{0} 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
Apr-20	KILN + RAW MILL (BH)	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
May-20	KILN + RAW MILL (BH)	PLANT STOPPED ALL MONTH							
Jun-20	KILN + RAW MILL (BH)	PLANT STOPPED ALL MONTH							
Jul-20	KILN + RAW MILL (BH)	PLANT STOPPED ALL MONTH							
Aug-20	KILN + RAW MILL (BH)	PLANT STOPPED ALL MONTH							
September' 2020									
2-Sep-20	KILN + RAW MILL (BH)	5.23	416	15.38	57.62	12.6	13.3	0.063	
8-Sep-20	KILN + RAW MILL (BH)	5.23	409	15.51	59.10	15.1		0.077	
15-Sep-20	KILN + RAW MILL (BH)	5.23	418	16.48	61.45	13.8		0.073	
22-Sep-20	KILN + RAW MILL (BH)	5.23	420	16.07	59.63	11.8		0.061	
Apr-20	CLINKER COOLER (ESP)	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
May-20	CLINKER COOLER (ESP)	PLANT STOPPED ALL MONTH							
Jun-20	CLINKER COOLER (ESP)	PLANT STOPPED ALL MONTH							
Jul-20	CLINKER COOLER (ESP)	PLANT STOPPED ALL MONTH							
Aug-20	CLINKER COOLER (ESP)	PLANT STOPPED ALL MONTH							
September' 2020									
2-Sep-20	CLINKER COOLER (ESP)	7.07	421	10.98	76.60	13.9	14.2	0.092	
8-Sep-20	CLINKER COOLER (ESP)	7.07	424	11.67	80.88	11.6		0.081	
15-Sep-20	CLINKER COOLER (ESP)	7.07	427	10.28	70.78	14.7		0.090	
22-Sep-20	CLINKER COOLER (ESP)	7.07	422	11.36	78.47	16.5		0.112	

Annexure-I

Apr-20	COAL MILL (B.F.)	0.45	351	14.55	6.42	17.6	16.1	0.010	
May-20	COAL MILL (B.F.)	0.45	349	14.04	6.23	11.7	11.2	0.006	
Jun-20	COAL MILL (B.F.)	0.45	345	13.82	6.39	16.2	14.6	0.009	
Jul-20	COAL MILL (B.F.)	0.45	347	14.10	6.66	18.8	16.3	0.011	
Aug-20	COAL MILL (B.F.)	0.45	344	13.85	6.38	13.4	15.7	0.007	
September' 2020									
2-Sep-20	COAL MILL (B.F.)	0.45	345	14.10	6.28	16.9	15.2	0.009	
8-Sep-20	COAL MILL (B.F.)	0.45	347	13.91	6.14	15.5		0.008	
15-Sep-20	COAL MILL (B.F.)	0.45	346	14.67	6.49	13.0		0.007	
22-Sep-20	COAL MILL (B.F.)	0.45	348	14.35	6.37	15.2		0.008	
Apr-20	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
May-20	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
Jun-20	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
Jul-20	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
Aug-20	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
Sep-20	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
Apr-20	CEMENT MILL No.-2 (B. H.)	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
May-20									
5-May-20	CEMENT MILL No.-2 (B. H.)	STOPPED					14.2		
12-May-20	CEMENT MILL No.-2 (B. H.)								
19-May-20	CEMENT MILL No.-2 (B. H.)	0.50	358	16.33	7.87	16.5		0.011	
26-May-20	CEMENT MILL No.-2 (B. H.)	0.50	361	15.84	7.59	11.9		0.008	

Jun-20									
6-Jun-20	CEMENT MILL No.-2 (B. H.)	0.50	365	16.61	7.93	15.6	11.7	0.011	
13-Jun-20	CEMENT MILL No.-2 (B. H.)	0.50	361	16.69	7.89	9.2		0.006	
20-Jun-20	CEMENT MILL No.-2 (B. H.)	0.50	363	16.44	7.88	11.7		0.008	
27-Jun-20	CEMENT MILL No.-2 (B. H.)	0.50	367	17.32	8.24	10.1		0.007	
Jul-20									
4-Jul-20	CEMENT MILL No.-2 (B. H.)	0.50	362	16.16	7.84	12.4	13.7	0.008	
10-Jul-20	CEMENT MILL No.-2 (B. H.)	0.50	364	16.50	8.06	11.5		0.008	
17-Jul-20	CEMENT MILL No.-2 (B. H.)	0.50	365	17.31	8.37	16.7		0.012	
24-Jul-20	CEMENT MILL No.-2 (B. H.)	0.50	361	17.49	8.57	14.3		0.011	
Aug-20									
4-Aug-20	CEMENT MILL No.-2 (B. H.)	0.50	360	16.33	8.00	10.4	13.1	0.007	
11-Aug-20	CEMENT MILL No.-2 (B. H.)	0.50	363	15.88	7.83	13.6		0.009	
18-Aug-20	CEMENT MILL No.-2 (B. H.)	0.50	361	16.64	8.10	15.4		0.011	
25-Aug-20	CEMENT MILL No.-2 (B. H.)	0.50	359	17.05	8.38	12.9		0.009	
Sept' 2020									
4-Sep-20	CEMENT MILL No.-2 (B. H.)	STOPPED					11.0		
11-Sep-20	CEMENT MILL No.-2 (B. H.)								
18-Sep-20	CEMENT MILL No.-2 (B. H.)	0.50	358	16.03	7.83	14.7		0.010	
25-Sep-20	CEMENT MILL No.-2 (B. H.)	0.50	362	16.46	8.01	7.3		0.005	
Apr/20	Crusher (B.F.)	PLANT STOPPED ALL MONTH							
May/20	Crusher (B.F.)	PLANT STOPPED ALL MONTH							
Jun/20	Crusher (B.F.)	PLANT STOPPED ALL MONTH							
Jul/20	Crusher (B.F.)	PLANT STOPPED ALL MONTH							
Aug/20	Crusher (B.F.)	PLANT STOPPED ALL MONTH							
Sept' 2020									
1-Sep-20	Crusher (B.F.)	0.38	326	9.53	3.31	11.9	12.80	0.003	
8-Sep-20	Crusher (B.F.)	0.38	328	10.13	3.50	14.1		0.004	
15-Sep-20	Crusher (B.F.)	0.38	324	10.73	3.75	11.8		0.004	
22-Sep-20	Crusher (B.F.)	0.38	325	10.45	3.64	13.2		0.004	

J.K. Cement WORKS, MANGROL (RAJ) (Unit-2)

DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE

April-20 to Sept'20

DATE	NAME OF THE STACK / DUCT ATTECHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M2)	STACK GASES TEMP. (^{0} 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
Apr-20	KILN + RAW MILL (B.F.)	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
7-May-20	KILN + RAW MILL (B.F.)	14.18	429	16.04	157.99	8.90	8.5	0.121	
14-May-20	KILN + RAW MILL (B.F.)	14.18	430	15.59	153.20	7.2		0.095	
21-May-20	KILN + RAW MILL (B.F.)	14.18	422	15.75	157.71	8.5		0.116	
28-May-20	KILN + RAW MILL (B.F.)	14.18	429	15.19	149.62	9.5		0.123	
	June'20								
4-Jun-20	KILN + RAW MILL (B.F.)	14.18	428	15.17	149.77	10.4	9.4	0.135	
14-Jun-20	KILN + RAW MILL (B.F.)	14.18	421	15.42	154.77	9.9		0.132	
18-Jun-20	KILN + RAW MILL (B.F.)	14.18	419	15.70	158.34	10.7		0.146	
25-Jun-20	KILN + RAW MILL (B.F.)	14.18	423	15.56	155.44	6.7		0.090	
	July'20								
3-Jul-20	KILN + RAW MILL (B.F.)	14.18	424	14.66	146.10	11.8	12.9	0.149	
10-Jul-20	KILN + RAW MILL (B.F.)	14.18	421	14.27	143.23	14.7		0.182	
17-Jul-20	KILN + RAW MILL (B.F.)	14.18	426	15.51	153.85	12.6		0.167	
24-Jul-20	KILN + RAW MILL (B.F.)	14.18	428	15.92	157.18	12.3		0.167	

	August'20								
4-Aug-20	KILN + RAW MILL (B.F.)	14.18	418.0	14.56	147.19	13.9	**11.8**	0.177	
11-Aug-20	KILN + RAW MILL (B.F.)	14.18	424.0	14.32	142.72	12.0		0.148	
18-Aug-20	KILN + RAW MILL (B.F.)	14.18	421.0	15.42	154.77	11.7		0.156	
25-Aug-20	KILN + RAW MILL (B.F.)	14.18	426.0	15.88	157.52	9.6		0.131	
	September'20								
4-Sep-20	KILN + RAW MILL (B.F.)	14.18	420	14.98	150.71	9.8	**12.4**	0.128	
11-Sep-20	KILN + RAW MILL (B.F.)	14.18	423	14.42	144.05	12.7		0.158	
18-Sep-20	KILN + RAW MILL (B.F.)	14.18	422	15.70	157.21	14.0		0.190	
25-Sep-20	KILN + RAW MILL (B.F.)	14.18	425	15.12	150.33	13.2		0.171	
Apr-20	CLINKER COOLER (ESP)	'PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
7-May-20	CLINKER COOLER (ESP)	8.80	438	14.61	122.02	10.40	**10.8**	0.110	
14-May-20	CLINKER COOLER (ESP)	8.80	435	14.15	118.93	9.8		0.101	
21-May-20	CLINKER COOLER (ESP)	8.80	432	14.40	119.88	11.4		0.118	
28-May-20	CLINKER COOLER (ESP)	8.80	437	13.94	116.79	11.6		0.117	
	June'20								
4-Jun-20	CLINKER COOLER (ESP)	8.80	435	13.97	116.30	9.8	**8.7**	0.098	
14-Jun-20	CLINKER COOLER (ESP)	8.80	431	13.54	113.81	7.4		0.073	
18-Jun-20	CLINKER COOLER (ESP)	8.80	433	13.51	112.83	9.1		0.089	
25-Jun-20	CLINKER COOLER (ESP)	8.80	429	13.63	113.47	8.5		0.083	

	July'20								
3-Jul-20	CLINKER COOLER (ESP)	8.80	430	13.15	111.96	9.7	**11.2**	0.094	
10-Jul-20	CLINKER COOLER (ESP)	8.80	434	13.77	117.62	12.2		0.124	
17-Jul-20	CLINKER COOLER (ESP)	8.80	427	12.72	109.73	10.9		0.103	
24-Jul-20	CLINKER COOLER (ESP)	8.80	426	13.40	114.84	11.9		0.118	
	August'20								
4-Aug-20	CLINKER COOLER (ESP)	8.80	427	13.54	116.80	12.2	**14.6**	0.123	
11-Aug-20	CLINKER COOLER (ESP)	8.80	421	12.89	112.30	14.1		0.137	
18-Aug-20	CLINKER COOLER (ESP)	8.80	424	14.43	124.89	17.6		0.190	
25-Aug-20	CLINKER COOLER (ESP)	8.80	422	12.71	110.37	14.5		0.138	
	September'20								
4-Sep-20	CLINKER COOLER (ESP)	8.80	429	13.33	115.75	11.8	**13.8**	0.118	
11-Sep-20	CLINKER COOLER (ESP)	8.80	424	13.55	116.89	15.1		0.152	
18-Sep-20	CLINKER COOLER (ESP)	8.80	426	12.71	110.00	14.5		0.138	
25-Sep-20	CLINKER COOLER (ESP)	8.80	427	14.14	121.58	13.8		0.145	
Apr-20	COAL MILL (B.F.)	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
7-May-20	COAL MILL (B.F.)	2.00	355	13.73	26.48	13.00	**15.3**	0.030	
14-May-20	COAL MILL (B.F.)	2.00	352	13.91	26.49	13.5		0.031	
21-May-20	COAL MILL (B.F.)	2.00	357	13.67	26.28	17.8		0.040	
28-May-20	COAL MILL (B.F.)	2.00	353	14.18	27.09	16.7		0.039	

	June'20								
4-Jun-20	COAL MILL (B.F.)	2.00	354	14.24	27.12	16.7	16.7	0.039	
14-Jun-20	COAL MILL (B.F.)	2.00	357	14.01	26.51	18.2		0.042	
18-Jun-20	COAL MILL (B.F.)	2.00	351	14.08	26.90	19.2		0.045	
25-Jun-20	COAL MILL (B.F.)	2.00	358	14.42	27.81	12.7		0.031	
	July'20								
3-Jul-20	COAL MILL (B.F.)	2.00	350	14.06	27.03	15.5	15.8	0.036	
10-Jul-20	COAL MILL (B.F.)	2.00	356	14.56	28.36	16.7		0.041	
17-Jul-20	COAL MILL (B.F.)	2.00	354	13.61	26.34	17.6		0.040	
24-Jul-20	COAL MILL (B.F.)	2.00	359	13.96	27.10	13.5		0.032	
	August'20								
4-Aug-20	COAL MILL (B.F.)	2.00	347	13.02	25.44	13.4	12.0	0.029	
11-Aug-20	COAL MILL (B.F.)	2.00	354	14.14	27.91	11.0		0.027	
18-Aug-20	COAL MILL (B.F.)	2.00	351	13.30	26.16	12.0		0.027	
25-Aug-20	COAL MILL (B.F.)	2.00	362	13.63	26.99	11.7		0.027	
	September'20								
4-Sep-20	COAL MILL (B.F.)	2.00	349	12.38	24.35	12.5	14.2	0.026	
11-Sep-20	COAL MILL (B.F.)	2.00	353	13.13	25.74	16.9		0.038	
18-Sep-20	COAL MILL (B.F.)	2.00	352	13.42	26.22	13.9		0.031	
25-Sep-20	COAL MILL (B.F.)	2.00	358	12.68	24.70	13.4		0.029	

Apr-20	CEMENT MILL (B.F.)	'PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
8-May-20	CEMENT MILL (B.F.)	6.60	369	15.11	94.95	19.2	19.4	0.158	
14-May-20	CEMENT MILL (B.F.)	6.60	371	15.01	94.92	19.7		0.162	
21-May-20	CEMENT MILL (B.F.)	6.60	367	14.78	92.58	18.5		0.148	
28-May-20	CEMENT MILL (B.F.)	6.60	370	14.37	91.17	20.1		0.158	
	June'20								
4-Jun-20	CEMENT MILL (B.F.)	6.60	369	14.73	93.76	6.8	7.9	0.055	
14-Jun-20	CEMENT MILL (B.F.)	6.60	371	15.38	99.18	10.2		0.087	
18-Jun-20	CEMENT MILL (B.F.)	6.60	367	15.79	99.86	7.9		0.068	
25-Jun-20	CEMENT MILL (B.F.)	6.60	371	14.58	93.41	6.5		0.052	
	July'20								
3-Jul-20	CEMENT MILL (B.F.)	6.60	367	14.40	92.25	11.4	10.3	0.091	
10-Jul-20	CEMENT MILL (B.F.)	6.60	369	14.68	93.44	9.9		0.080	
17-Jul-20	CEMENT MILL (B.F.)	6.60	370	15.08	96.93	10.7		0.090	
24-Jul-20	CEMENT MILL (B.F.)	6.60	365	14.75	94.19	9.2		0.075	
	August'20								
4-Aug-20	CEMENT MILL (B.F.)	6.60	364	13.70	88.64	11.0	10.8	0.084	
11-Aug-20	CEMENT MILL (B.F.)	6.60	367	14.30	93.44	10.5		0.085	
18-Aug-20	CEMENT MILL (B.F.)	STOPPED							
25-Aug-20	CEMENT MILL (B.F.)	STOPPED							

	September,20								
4-Sep-20	CEMENT MILL (B.F.)	6.60	365	14.02	91.01	11.5	11.5	0.090	
11-Sep-20	CEMENT MILL (B.F.)	6.60	366	13.63	88.18	14.6		0.111	
18-Sep-20	CEMENT MILL (B.F.)	6.60	368	12.82	83.49	10.7		0.077	
25-Sep-20	CEMENT MILL (B.F.)	6.60	364	13.13	84.67	9.3		0.068	
Apr-20	CRUSHER BAG FILTER	'PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
7-May-20	CRUSHER BAG FILTER	1.23	331	12.26	13.58	18.70	16.8	0.022	
14-May-20	CRUSHER BAG FILTER	1.23	335	12.49	13.67	15.9		0.019	
20-May-20	CRUSHER BAG FILTER	1.23	339	11.82	12.78	18.3		0.020	
25-May-20	CRUSHER BAG FILTER	1.23	341	12.18	13.09	14.4		0.016	
	June'20								
4-Jun-20	CRUSHER BAG FILTER	1.23	331	12.06	13.35	12.2	14.5	0.014	
14-Jun-20	CRUSHER BAG FILTER	1.23	327	11.28	12.64	15.0		0.016	
18-Jun-20	CRUSHER BAG FILTER	1.23	334	11.84	12.99	17.4		0.020	
25-Jun-20	CRUSHER BAG FILTER	1.23	330	11.56	12.84	13.5		0.015	
	July'20								
3-Jul-20	CRUSHER BAG FILTER	1.23	329	11.81	13.16	9.6	11.8	0.011	
10-Jul-20	CRUSHER BAG FILTER	1.23	331	11.74	13.00	13.2		0.015	
17-Jul-20	CRUSHER BAG FILTER	1.23	336	12.20	13.31	10.3		0.012	
24-Jul-20	CRUSHER BAG FILTER	1.23	334	11.24	12.34	14.1		0.015	

	August '20								
4-Aug-20	CRUSHER BAG FILTER	1.23	327	12.14	13.61	14.30		0.017	
11-Aug-20	CRUSHER BAG FILTER	1.23	329	11.43	12.73	10.9	**12.5**	0.012	
18-Aug-20	CRUSHER BAG FILTER	1.23	332	12.49	13.79	13.9		0.017	
28-Aug-20	CRUSHER BAG FILTER	1.23	324	11.77	13.32	11.0		0.013	
	September'20								
4-Sep-20	CRUSHER BAG FILTER	1.23	328	11.84	13.23	8.0		0.009	
11-Sep-20	CRUSHER BAG FILTER	1.23	330	11.11	12.34	10.4	**10.6**	0.011	
18-Sep-20	CRUSHER BAG FILTER	1.23	329	12.48	13.90	14.3		0.017	
25-Sep-20	CRUSHER BAG FILTER	1.23	332	11.65	12.86	9.8		0.011	
Apr-20	PACKER -1 BAG FILTER	'PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
6-May-20	PACKER -1 BAG FILTER	0.785	327	12.03	9.02	10.6		0.008	
13-May-20	PACKER -1 BAG FILTER	0.785	329	12.38	9.19	12.9	**11.8**	0.010	
20-May-20	PACKER -1 BAG FILTER	0.785	325	12.10	9.10	14.5		0.011	
28-May-20	PACKER -1 BAG FILTER	0.785	331	12.52	9.36	9.0		0.007	
	June'20								
1-Jun-20	PACKER -1 BAG FILTER	0.785	327	12.54	9.43	12.8		0.010	
8-Jun-20	PACKER -1 BAG FILTER	0.785	330	12.14	9.02	14.7	**12.4**	0.011	
15-Jun-20	PACKER -1 BAG FILTER	0.785	329	12.93	9.66	8.6		0.007	
22-Jun-20	PACKER -1 BAG FILTER	0.785	331	12.57	9.42	13.4		0.011	

	July'20								
8-Jul-20	PACKER -1 BAG FILTER	0.785	328	12.21	9.30	13.7	**12.7**	0.011	
15-Jul-20	PACKER -1 BAG FILTER	0.785	325	12.40	9.51	10.2		0.008	
22-Jul-20	PACKER -1 BAG FILTER	0.785	330	13.19	9.99	12.7		0.011	
29-Jul-20	PACKER -1 BAG FILTER	0.785	326	13.39	10.24	14.1		0.012	
	August'20								
1-Aug-20	PACKER -1 BAG FILTER	0.785	323	12.32	9.54	11.8	**13.9**	0.010	
8-Aug-20	PACKER -1 BAG FILTER	0.785	324	11.77	9.09	12.9		0.010	
22-Aug-20	PACKER -1 BAG FILTER	STOPPED							
29-Aug-20	PACKER -1 BAG FILTER	0.785	327	13.27	10.31	17.0		0.015	
	Sepetmber'20								
3-Sep-20	PACKER -1 BAG FILTER	0.785	325	12.55	9.69	9.9	**11.7**	0.008	
10-Sep-20	PACKER -1 BAG FILTER	0.785	324	12.73	9.80	10.7		0.009	
17-Sep-20	PACKER -1 BAG FILTER	0.785	327	12.14	9.43	12.6		0.010	
24-Sep-20	PACKER -1 BAG FILTER	0.785	326	11.91	9.23	13.5		0.011	
Apr-20	PACKER -2 BAG FILTER	'PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
6-May-20	PACKER -2 BAG FILTER	0.785	327	12.34	9.34	14.6	**15.1**	0.012	
13-May-20	PACKER -2 BAG FILTER	0.785	331	12.11	9.11	16.6		0.013	
20-May-20	PACKER -2 BAG FILTER	0.785	332	11.92	8.88	15.2		0.012	
28-May-20	PACKER -2 BAG FILTER	0.785	329	11.70	8.77	14.0		0.011	

	June'20								
1-Jun-20	PACKER -2 BAG FILTER	0.785	330	12.75	9.5	9.6		0.008	
8-Jun-20	PACKER -2 BAG FILTER	0.785	332	12.98	9.76	12.2	**11.1**	0.010	
15-Jun-20	PACKER -2 BAG FILTER	0.785	327	12.34	9.16	10.2		0.008	
22-Jun-20	PACKER -2 BAG FILTER	0.785	328	13.05	9.75	12.5		0.011	
	July'20								
8-Jul-20	PACKER -2 BAG FILTER	0.785	327	12.14	9.16	11.6		0.009	
15-Jul-20	PACKER -2 BAG FILTER	0.785	331	12.42	9.49	12.5	**11.9**	0.010	
22-Jul-20	PACKER -2 BAG FILTER	0.785	325	13.04	9.90	10.6		0.009	
29-Jul-20	PACKER -2 BAG FILTER	0.785	329	13.45	10.18	12.8		0.011	
	August'20								
1-Aug-20	PACKER -2 BAG FILTER	0.785	325	12.89	10.02	14.7		0.013	
8-Aug-20	PACKER -2 BAG FILTER	0.785	329	12.33	9.52	11.8	**14.2**	0.010	
22-Aug-20	PACKER -2 BAG FILTER	STOPPED							
29-Aug-20	PACKER -2 BAG FILTER	0.785	327	13.59	10.53	16.2		0.015	
	September'20								
3-Sep-20	PACKER -2 BAG FILTER	0.785	328	13.43	10.4	13.7		0.012	
10-Sep-20	PACKER -2 BAG FILTER	0.785	325	13.04	10.03	15.4	**15.3**	0.013	
17-Sep-20	PACKER -2 BAG FILTER	0.785	326	12.62	9.74	14.3		0.012	
24-Sep-20	PACKER -2 BAG FILTER	0.785	327	11.88	9.11	17.6		0.014	
Apr-20	PACKER -3 BAG FILTER	'PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							

	May'20								
6-May-20	PACKER -3 BAG FILTER	0.785	330	12.19	9.11	12.6	10.7	0.010	
13-May-20	PACKER -3 BAG FILTER	0.785	328	12.46	9.25	8.0		0.006	
20-May-20	PACKER -3 BAG FILTER	0.785	332	12.18	9.13	11.2		0.009	
28-May-20	PACKER -3 BAG FILTER	0.785	329	12.58	9.34	10.9		0.009	
	June'20								
1-Jun-20	PACKER -3 BAG FILTER	0.785	327	12.54	9.43	8.6	**10.6**	0.007	
8-Jun-20	PACKER -3 BAG FILTER	0.785	331	12.77	9.54	10.9		0.009	
15-Jun-20	PACKER -3 BAG FILTER	0.785	333	12.25	9.1	13.0		0.010	
22-Jun-20	PACKER -3 BAG FILTER	0.785	332	12.98	9.79	9.7		0.008	
	July'20								
8-Jul-20	PACKER -3 BAG FILTER	0.785	334	12.97	9.85	10.4	**10.8**	0.009	
15-Jul-20	PACKER -3 BAG FILTER	0.785	330	12.19	9.32	11.1		0.009	
22-Jul-20	PACKER -3 BAG FILTER	0.785	327	12.59	9.5	12.3		0.010	
29-Jul-20	PACKER -3 BAG FILTER	0.785	329	13.12	10	9.4		0.008	
	August'20								
1-Aug-20	PACKER -3 BAG FILTER	0.785	332	12.59	9.72	11.1	**13.2**	0.009	
8-Aug-20	PACKER -3 BAG FILTER	0.785	329	12.12	9.42	13.7		0.011	
22-Aug-20	PACKER -3 BAG FILTER								
29-Aug-20	PACKER -3 BAG FILTER	0.785	327	12.64	9.79	14.8		0.013	
	September'20								
3-Sep-20	PACKER -3 BAG FILTER	0.785	331.00	12.26	9.43	12.7	**12.9**	0.010	
10-Sep-20	PACKER -3 BAG FILTER	0.785	328.00	12.51	9.69	8.7		0.007	
17-Sep-20	PACKER -3 BAG FILTER	0.785	282.00	12.32	9.51	14.2		0.012	
24-Sep-20	PACKER -3 BAG FILTER	0.785	326.00	12.96	9.94	15.9		0.014	

Apr-20	PACKER -4 BAG FILTER	'PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
6-May-20	PACKER -4 BAG FILTER	0.785	327	12.29	9.24	11.4	**12.4**	0.009	
13-May-20	PACKER -4 BAG FILTER	0.785	331	11.90	8.84	13.4		0.010	
20-May-20	PACKER -4 BAG FILTER	0.785	329	11.70	8.77	10.7		0.008	
28-May-20	PACKER -4 BAG FILTER	0.785	330	11.83	8.81	14.1		0.011	
	June'20								
1-Jun-20	PACKER -4 BAG FILTER	0.785	327	12.69	9.48	15.5	**13.0**	0.013	
8-Jun-20	PACKER -4 BAG FILTER	0.785	331	12.11	8.99	13.3		0.010	
15-Jun-20	PACKER -4 BAG FILTER	0.785	329	12.83	9.62	12.9		0.011	
22-Jun-20	PACKER -4 BAG FILTER	0.785	334	12.58	9.34	10.3		0.008	
	July'20								
1-Jul-20	PACKER -4 BAG FILTER	0.785	328	13.43	10.30	13.0	**13.6**	0.012	
8-Jul-20	PACKER -4 BAG FILTER	0.785	325	12.80	9.72	11.5		0.010	
15-Jul-20	PACKER -4 BAG FILTER	0.785	330	12.70	9.58	15.3		0.013	
22-Jul-20	PACKER -4 BAG FILTER	0.785	332	13.18	10.14	14.5		0.013	
	August'20								
1-Aug-20	PACKER -4 BAG FILTER	0.785	329	12.63	9.72	14.3	**15.2**	0.012	
8-Aug-20	PACKER -4 BAG FILTER	0.785	331	12.92	10.01	16.1		0.014	
22-Aug-20	PACKER -4 BAG FILTER	STOPPED							
29-Aug-20	PACKER -4 BAG FILTER	0.785	324	13.35	10.38	15.1		0.014	
	September'20								
3-Sep-20	PACKER -4 BAG FILTER	0.785	328	13.29	10.26	12.1	**14.1**	0.011	
10-Sep-20	PACKER -4 BAG FILTER	0.785	327	12.69	9.77	13.9		0.012	
17-Sep-20	PACKER -4 BAG FILTER	0.785	329	13.07	10.12	14.7		0.013	
24-Sep-20	PACKER -4 BAG FILTER	0.785	326	12.12	9.30	15.6		0.013	

J.K. Cement WORKS, MANGROL (RAJ) (Unit-3)

DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE

April-20 to Sept'20

DATE	NAME OF THE STACK / DUCT ATTECHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M2)	STACK GASES TEMP. (^{0} 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
Apr-20	KILN No.3 BAG HOUSE	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
9-May-20	KILN No.3 BAG HOUSE	12.56	437	18.30	156.74	11.7	10.2	0.158	
16-May-20	KILN No.3 BAG HOUSE	12.56	433	18.49	159.83	8.9		0.123	
23-May-20	KILN No.3 BAG HOUSE	12.56	431	18.80	163.26	10.4		0.147	
30-May-20	KILN No.3 BAG HOUSE	12.56	429	18.49	161.32	9.8		0.137	
	June'20								
6-Jun-20	KILN No.3 BAG HOUSE	12.56	437.00	18.62	159.48	7.00	8.4	0.096	
13-Jun-20	KILN No.3 BAG HOUSE	12.56	433.00	19.02	164.41	9.90		0.141	
20-Jun-20	KILN No.3 BAG HOUSE	12.56	427.00	19.15	167.86	7.80		0.113	
27-Jun-20	KILN No.3 BAG HOUSE	12.56	431.00	18.22	158.23	8.70		0.119	
	July'20								
6-Jul-20	KILN No.3 BAG HOUSE	12.56	431	17.66	153.36	10.4	11.7	0.138	
13-Jul-20	KILN No.3 BAG HOUSE	12.56	435	19.37	166.67	13.1		0.189	
20-Jul-20	KILN No.3 BAG HOUSE	12.56	429	18.89	164.81	12.1		0.172	
27-Jul-20	KILN No.3 BAG HOUSE	12.56	425	18.09	159.31	11.0		0.151	
	August'20								
1-Aug-20	KILN No.3 BAG HOUSE	12.56	427	17.00	149.01	9.3	9.3	0.120	
8-Aug-20	KILN No.3 BAG HOUSE	12.56	436	18.28	156.93	8.1		0.110	
15-Aug-20	KILN No.3 BAG HOUSE	12.56	430	19.30	167.99	10.5		0.152	
22-Aug-20	KILN No.3 BAG HOUSE	STOPPED							

	September'20								
1-Sep-20	KILN No.3 BAG HOUSE	STOPPED					13.6		
8-Sep-20	KILN No.3 BAG HOUSE	STOPPED							
15-Sep-20	KILN No.3 BAG HOUSE	12.56	428	17.97	157.15	14.0		0.190	
22-Sep-20	KILN No.3 BAG HOUSE	12.56	425	18.85	166.01	13.1		0.188	
Apr-20	CLINKER COOLER (ESP)-3	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC							
	May'20								
9-May-20	CLINKER COOLER (ESP)-3	9.61	539	15.55	142	6.40	7.4	0.079	
16-May-20	CLINKER COOLER (ESP)-3	9.61	532	14.98	136	8.60		0.101	
23-May-20	CLINKER COOLER (ESP)-3	9.61	537	15.25	140	7.90		0.096	
30-May-20	CLINKER COOLER (ESP)-3	9.61	533	15.73	143	6.80		0.084	
	June'20								
6-Jun-20	CLINKER COOLER (ESP)-3	9.61	531	15.83	144.84	6.2	6.8	0.078	
13-Jun-20	CLINKER COOLER (ESP)-3	9.61	534	15.68	142.55	7.6		0.094	
20-Jun-20	CLINKER COOLER (ESP)-3	9.61	537	15.25	139.98	6.4		0.077	
27-Jun-20	CLINKER COOLER (ESP)-3	9.61	533	14.99	138.93	7.0		0.084	
	July'20								
6-Jul-20	CLINKER COOLER (ESP)-3	9.61	537	14.98	139.74	12.7	12.4	0.153	
13-Jul-20	CLINKER COOLER (ESP)-3	9.61	527	15.71	145.13	10.5		0.132	
20-Jul-20	CLINKER COOLER (ESP)-3	9.61	521	14.69	137.48	11.1		0.132	
27-Jul-20	CLINKER COOLER (ESP)-3	9.61	532	15.58	146.29	15.2		0.192	
	August'20								
1-Aug-20	CLINKER COOLER (ESP)-3	9.61	547	15.53	147.27	14.1	15.4	0.179	
8-Aug-20	CLINKER COOLER (ESP)-3	9.61	538	16.58	156.70	16.3		0.221	
15-Aug-20	CLINKER COOLER (ESP)-3	9.61	530	16.14	154.07	15.7		0.209	
22-Aug-20	CLINKER COOLER (ESP)-3	STOPPED							

	September'20								
1-Sep-20	CLINKER COOLER (ESP)-3	STOPPED					14.2		
8-Sep-20	CLINKER COOLER (ESP)-3	STOPPED							
15-Sep-20	CLINKER COOLER (ESP)-3	9.61	494	14.63	137.82	12.4		0.148	
22-Sep-20	CLINKER COOLER (ESP)-3	9.61	509	14.58	136.45	15.9		0.187	
April'20	COAL MILL - 3 BAG HOUSE	STOPPED							
	May'20								
9-May-20	COAL MILL - 3 BAG HOUSE	3.94	345.00	7.44	27.91	8.00	8.93	0.019	
16-May-20	COAL MILL - 3 BAG HOUSE	3.94	342.00	7.14	27.13	10.80		0.025	
23-May-20	COAL MILL - 3 BAG HOUSE	3.94	343.00	7.24	27.07	9.00		0.021	
30-May-20	COAL MILL - 3 BAG HOUSE	3.94	347.00	6.96	26.28	7.90		0.018	
	June'20								
6-Jun-20	COAL MILL - 3 BAG HOUSE	3.94	347	7.37	28.00	6.4	7.3	0.015	
13-Jun-20	COAL MILL - 3 BAG HOUSE	3.94	341	7.03	26.54	8.1		0.019	
20-Jun-20	COAL MILL - 3 BAG HOUSE	3.94	343	6.57	24.65	6.7		0.014	
27-Jun-20	COAL MILL - 3 BAG HOUSE	3.94	345	7.21	27.31	7.8		0.018	
	July'20								
6-Jul-20	COAL MILL - 3 BAG HOUSE	3.94	344	8.50	32.51	10.1	10.4	0.028	
13-Jul-20	COAL MILL - 3 BAG HOUSE	3.94	340	7.47	28.76	13.7		0.034	
20-Jul-20	COAL MILL - 3 BAG HOUSE	3.94	347	7.19	27.32	9.7		0.023	
27-Jul-20	COAL MILL - 3 BAG HOUSE	3.94	342	7.87	30.20	8.2		0.021	
	August'20								
1-Aug-20	COAL MILL - 3 BAG HOUSE	3.94	342	8.92	34.56	11.7	12.5	0.035	
8-Aug-20	COAL MILL - 3 BAG HOUSE	3.94	346	8.68	33.86	13.5		0.039	
15-Aug-20	COAL MILL - 3 BAG HOUSE	3.94	344	8.02	31.18	12.4		0.033	
22-Aug-20	COAL MILL - 3 BAG HOUSE	STOPPED							
	September'20								
1-Sep-20	COAL MILL - 3 BAG HOUSE	STOPPED					16.1		
8-Sep-20	COAL MILL - 3 BAG HOUSE	STOPPED							
16-Sep-20	COAL MILL - 3 BAG HOUSE	3.94	342	8.16	31.41	13.7		0.037	
23-Sep-20	COAL MILL - 3 BAG HOUSE	4.94	350	7.84	37.97	18.5		0.061	

April'20	CEMENT MILL No. - 4 BAG HOUSE	STOPPED							
	May'2020								
9-May-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	387	6.88	40.41	15.8	17.8	0.06	
16-May-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	393	6.6	38.52	19.0		0.06	
23-May-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	389	6.68	39.36	16.5		0.06	
30-May-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	385	6.38	37.36	19.9		0.06	
	June'20								
6-Jun-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	383	7.15	42.41	16.7	14.7	0.06	
13-Jun-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	387	6.55	38.35	12.1		0.04	
20-Jun-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	389	7.51	43.42	13.4		0.05	
27-Jun-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	385	6.82	40.19	16.4		0.06	
	July'20								
6-Jul-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	387	6.43	38.51	10.1	13.1	0.034	
13-Jul-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	391	6.80	40.46	13.8		0.048	
20-Jul-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	388	6.44	38.07	12.7		0.042	
27-Jul-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	387	6.94	41.70	15.6		0.056	
	August'20								
4-Aug-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	383	6.73	40.98	10.5	12.9	0.037	
11-Aug-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	386	5.95	35.99	11.8		0.037	
18-Aug-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	382	6.50	39.71	14.1		0.048	
27-Aug-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	390	7.48	45.39	15.1		0.059	
	September'20								
1-Sep-20	CEMENT MILL No. - 4 BAG HOUSE	STOPPED					15.5		
8-Sep-20	CEMENT MILL No. - 4 BAG HOUSE	STOPPED							
15-Sep-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	380	6.49	39.00	15.6		0.053	
25-Sep-20	CEMENT MILL No. - 4 BAG HOUSE	6.15	386	6.93	41.51	15.3		0.055	

Annexure - I

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650006
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/260
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01198
Sample Description : Stack Emission
Date & Time of Sampling: 11.06.2020 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	**Result**	**Method**
1.Temperature of emission (°C)	: 31 (53)	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 15.80	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 21.0 (16.8)	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

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/240
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01178
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2020 at 09.20 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 (158.5)	
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)	: 144	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 19.2 (15.9)	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 19.44	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 612.20 (485)	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm^3)	: 18.0 (10.8)	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

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/241
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01179
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2020 at 09.30 a.m
Sampling Location : Kiln & Raw mill stack (Line – 3)

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 (148)	
2.Diameter of the Stack at sampling point	: 4.25 m (4.0)	
3.Area of Stack	: 14.19 m^2 (12.56)	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 134 (154)	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 18.48	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 22.34	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 536.0 (418)	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm^3)	: 16.0 (6.8)	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

TESTING ● INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/249
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01187
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2020 at 11.30 A.M
Sampling Location : Coal Mill (Line – 2)

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 (51.2)	
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)	: 71	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 16.4	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

For Mitra S.K. Private Limited

MITRA S.K. PVT. LTD. RAJASTHAN

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650006
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/250
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01188
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2020 at 11.20 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 (62.2)	
2.Diameter of the Stack at sampling point	: 1.6 m (2.24)	
3.Area of Stack	: 2.01 m^2 (3.94)	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
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)	: 15.2 (8.5)	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 16.0 (7.9)	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

MITRA S.K. PVT. LTD. RAJASTHAN

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/251
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01189
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2020 at 01.20 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)	: 110 (138)	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.9 (13.5)	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 19.0 (11.6)	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

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/252
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01190
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2020 at 01.10 P.M
Sampling Location : Clinker Cooler (Line – 3)

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 (45.3)	
2.Diameter of the Stack at sampling point	: 3.35 m (3.5)	
3.Area of Stack	: 8.81 m^2 (9.61)	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 114 (162)	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 9.0 (15.68)	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 17.0 (9.5)	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

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/253
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01191
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2020 at 03.15 p.m
Sampling Location : Cement Mill 2 (Line – 1)

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	: 30.0 m (35)	
2.Diameter of the Stack at sampling point	: 0.80 m (1.1)	
3.Area of Stack	: 0.502 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 91	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 9.82 (15.85)	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 8.9	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

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/254
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01192
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2020 at 03.30 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)	: 93	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 10.40	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

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/255
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01193
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2020 at 04.40 p.m
Sampling Location : Cement Mill 4 (Line – 3)

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 (60.0)	
2.Diameter of the Stack at sampling point	: 2.9 m (2.8)	
3.Area of Stack	: 6.60. m^2 (6.15)	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 90 (105)	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 11.22 (8.95)	EPA Part 2
4.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 filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/256
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01194
Sample Description : Stack Emission
Date & Time of Sampling: 11.06.2020 at 09.30 a.m
Sampling Location : Packer 1 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
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. 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 :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/257
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01195
Sample Description : Stack Emission
Date & Time of Sampling: 11.06.2020 at 11.00 A.M
Sampling Location : Packer 2 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
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. 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)	: 11.0	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

TESTING ● INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/258
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01196
Sample Description : Stack Emission
Date & Time of Sampling: 11.06.2020 at 12.50 p.m
Sampling Location : Packer 3 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
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	
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)	: 12.0	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

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/259
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01197
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2020 at 6.00 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)	: 16.0	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

Annexure - I

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/606
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00054
Sample Description : Stack Emission
Date & Time of Sampling: 11.08.2020 at 11.50 A.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	**Result**	**Method**
1.Temperature of emission (°C)	: 33	EPA Part 2
2.Barometric pressure (mm of Hg)	: 739	EPA Part 2
3.Velocity of gas (m/sec)	: 15.0	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 17.82	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

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/607
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00055
Sample Description : Stack Emission
Date & Time of Sampling: 11.08.2020 at 12.35 P.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	: 158.5 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)	: 149	EPA Part 2
2.Barometric pressure (mm of Hg)	: 737	EPA Part 2
3.Velocity of gas (m/sec)	: 20.29	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 19.5	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 57.1	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm^3)	: 22.0	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

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlepally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

Vimta
Driven by Quality. Inspired by Science.

ISSUED TO:

M/S. J.K. CEMENT LIMITED
Unit: - J.K. CEMENT WORKS MANGROL
C/o. KAILASH NAGAR, NIMBAHERA,
DIST: CHITTORGARH, RAJASTHAN-312617,
INDIA.

Report Number	:	VLL/VLS/20/04486/001
Issued Date	:	2020-09-05
Your Ref	:	4600066227
And Date	:	04.08.2020

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-II

Sample Registration Date	:	2020-08-17	Sample Collection Date	:	2020-08-12
Analysis Starting Date	:	2020-08-17	Analysis Completion Date	:	2020-09-05
Test Required	:	O_2, PM, SO_2, NOx, HCl, HF, CO, CO_2, and TOC.			
Sample Collected by Vimta Labs Ltd.					

TEST REPORT

Sr.No.	Parameters	UoM	Method of Testing	Results	Limits as per MoEF & CC Notification GSR 497(E)
1	Diameter of stack	m	-	4.25	--
2	Flue gas temperature	^0C	-	117	--
3	Fuel	-	Coal+ pet coke+ co-processing of waste	--	--
4	Oxygen as O_2	%	Flue Gas Analyzer	10.2	--
5	Velocity	m/sec	USEPA Method- 3	7.85	--
6	Volumetric flow rate	Nm^3/Sec		133.4	--
7	Carbon Monoxide as CO	mg/Nm^3	USEPA Method CTM 30 & 34	93	< 100.0
8	Carbon Dioxide as CO_2	%		12.03	--
9	Sulphur Dioxide	mg/Nm^3		16	< 100.0
10	Oxides of Nitrogen, NOx as NO_2	mg/Nm^3		642	< 800.0
11	Particulate Matter	mg/Nm^3	USEPA method-5	18.4	< 30.0
12	Hydrogen Chloride as HCl	mg/Nm^3	USEPA method -26	3.3	< 10.0
13	Hydrogen Fluoride as HF	mg/Nm^3	USEPA method -13	0.61	< 1.0
14	Total Organic Compounds as TOC	mg/nm^3	USEPA method -40 & MM5(10)	3.9	< 10.0

All the Values are represented at 10% O_2

Dr. SubbaReddy Mallampati
Group Leader-Environment

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlepally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

Vimta
Driven by Quality. Inspired by Science.

ISSUED TO:
M/S. J.K. CEMENT LIMITED
Unit: - J.K. CEMENT WORKS
C/o. KAILASH NAGAR, NIMBAHERA,
DIST: CHITTORGARH, RAJASTHAN-312617,
INDIA.

Report Number : VLL/VLS/20/04486/001
Issued Date : 2020-09-05
Your Ref : 4600066227
And Date : 04.08.2020

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-II

Sample Registration Date	:	2020-08-17	Sample Collection Date	:	2020-08-12
Analysis Starting Date	:	2020-08-17	Analysis Completion Date	:	2020-09-05
Test Required	:	Hg & its compounds, Cd + Tl its compounds, Sb+ As+ Pb+ Co+ Cr+ Cu+ Mn+ Ni+ V+ Their compounds			

Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr.No.	Parameters	UoM	Method of Testing	Results	Limits as per MoEF & CC Notification GSR 497(E)
1	Mercury as Hg + their Compound	mg/Nm^3	USEPA method -29	<0.001	< 0.05
2	Cadmium + Thallium (Cd + Tl) + their Compound			<0.001	< 0.05
3	Chromium as Cr + their Compound			0.025	--
	Manganese as Mn + their Compound			0.016	
	Arsenic as As + their Compound			0.007	
	Antimony as Sb + their Compound			0.012	
	Lead as Pb + their Compound			0.021	
	Cobalt as Co + their Compound			0.013	
	Copper as Cu + their Compound			0.014	
	Nickel as Ni + their Compound			0.019	
	Vanadium as V + their Compound			0.014	
	Sb+ As+ Pb+ Co+ Cr+ Cu+ Mn+ Ni+ V+ Their compounds			0141	< 0.5

Instruments used: GC-FID, ICP-MS, Cold Vapor AAS and GC-MS
All the values are represented at 10% O_2

Dr. SubbaReddy Mallampati
Group Leader-Environment

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlepally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

Vimta
Driven by Quality. Inspired by Science.

ISSUED TO:
M/S. J.K. CEMENT LIMITED
Unit: - J.K. CEMENT WORKS
C/o. KAILASH NAGAR, NIMBAHERA,
DIST: CHITTORGARH, RAJASTHAN-312617,
INDIA.

Report Number : VLL/VLS/20/04486/001
Issued Date : 2020-09-05
Your Ref : 4600066227
And Date : 04.08.2020

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-II

Sample Registration Date	: 2020-08-17	Sample Collection Date	: 2020-08-12
Analysis Starting Date	: 2020-08-17	Analysis Completion Date	: 2020-09-05
Test Required	: PCDD & PCDF		
Sample Collected by Vimta Labs Ltd.			

TEST REPORT

Sr.No.	Parameters	UoM	Results
1	2,3,7,8-TCDF	ng/Nm^3, TEQ	0.0027
2	1,2,3,7,8-PeCDF		0.0024
3	2,3,4,7,8-PeCDF		0.0021
4	1,2,3,4,7,8-HxCDF		0.0021
5	1,2,3,6,7,8-HxCDF		0.0017
6	2,3,4,6,7,8-HxCDF		0.0018
7	1,2,3,7,8,9-HxCDF		0.0024
8	1,2,3,4,6,7,8-HpCDF		0.0022
9	1,2,3,4,7,8,9-HpCDF		0.0004
10	OCDF		0.0024
11	2,3,7,8-TCDD		0.0021
12	1,2,3,7,8-PeCDD		0.0027
13	1,2,3,4,7,8-HxCDD		0.0006
14	1,2,3,6,7,8-HxCDD		0.0020
15	1,2,3,7,8,9-HxCDD		0.0024
16	1,2,3,4,6,7,8-HpCDD		0.0022
17	OCDD		0.0006
Total Furans & Dioxins		**ng/Nm^3, TEQ**	**0.0328**
Total Furans & Dioxins		**ng/Nm^3, TEQ Corrected to 10% O_2 Concentration**	**0.0335**
Limits as per MoEF & CC Notification GSR 497(E)			**< 0.1**

Method of Testing: As per USEPA 23 A & 8290
Instruments used: Auto spec Premier (HRGC/HRMS). Detection Limit: 0.01ng

Dr. SubbaReddy Mallampati
Group Leader-Environment

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/608
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00056
Sample Description : Stack Emission
Date & Time of Sampling: 10.08.2020 at 03.40 P.M
Sampling Location : Kiln & Raw mill stack (Line – 3)

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	: 148 m	
2.Diameter of the Stack at sampling point	: 1.0 m	
3.Area of Stack	: 12.56 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 147	EPA Part 2
2.Barometric pressure (mm of Hg)	: 738	EPA Part 2
3.Velocity of gas (m/sec)	: 19.89	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 16.70	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 64.6	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm^3)	: 14.46	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

MITRA S.K. PVT. LTD.

Authorised Signatory

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
W: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/595
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00043
Sample Description : Stack Emission
Date & Time of Sampling: 12.08.2020 at 08.20 A.M
Sampling Location : Coal Mill (Line – 2)

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	: 51.2 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)	: 73	EPA Part 2
2.Barometric pressure (mm of Hg)	: 737	EPA Part 2
3.Velocity of gas (m/sec)	: 14.98	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 12.10	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

MITRA S.K. PVT. LTD.

Authorised Signatory

J.K. Cement WORKS, Mangrol (RAJ)

25 MW THERMAL POWER PLANT

Stack monitoring results (April' 2020 - September' 2020)

Location/Month	SPM (Mg/Nm3)					
	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20
Stack attached with Boiler	Plant stopped due to major shutdown					22.9
Stack attached with Coal Crusher	Plant stopped due to major shutdown					18.7

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/806
Date : 07.10.2020
Sample No. : MSKGL/ED/2020-21/09/01353
Sample Description : Flue Gas Monitoring
Sampling Location :25 MW Thermal Power Plant (Mangrol)
Date & Time of Sampling : 15.09.2020 at 10.00 a.m.

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Boiler	
2.Emission due to	: Power Generation	
3.Material of construction of Stack	: RCC	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
6.Generation Capacity	: 25 MW	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 110.0 m	
2.Diameter of the Stack at sampling point	: 3.69 m	
3. Height of the sampling point from GL	: 38.10 m	
4.Area of Stack	: 10.68 m^2	
C. Analysis/Characteristic of stack		
1. Fuel used : Coal		
D. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 125	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 11.84	EPA Part 2
4.Concentration of Oxygen (% v/v)	: 6.2	IS 13270:1992,Reaf:2014
5.Conc. of Particulate Matters (mg/Nm^3) at 6% O_2 on dry basis	: 25.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack	: Electrostatic precipitator	
F. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/807
Date : 07.10.2020
Sample No. : MSKGL/ED/2020-21/09/01354
Sample Description : Flue Gas Monitoring
Sampling Location : Coal Crusher Plant (Mangrol)
Date & Time of Sampling : 15.09.2020 at 12.00 p.m.

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Coal Crusher	
2.Emission due to	: Coal 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	: 30.0 m	
2.Diameter of the Stack at sampling point	: 0.40 m	
3. Height of the sampling point from GL	: 7.0 m	
4.Area of Stack	: 0.127 m^2	
C. Analysis/Characteristic of stack		
1. Fuel used : Coal		
D. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 52	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 12.01	EPA Part 2
5.Conc. of Particulate Matters (mg/Nm^3) at 6% O_2 on dry basis	: 16.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	
F. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

MITRA S.K. PVT. LTD.

Authorised Signatory

J.K. Cement WORKS, MANGROL (RAJ)

AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON

FOR UNIT-1 ,2 ,3,CPP,WHRS & TWONSHIP

(ALL VALUES IN MICROGRAMS / CUBIC METER)

(April' 2020 - September' 2020)

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR FACTORY GATE	NEAR COLONY GATE	Remarks
April'2020						
1	SPM	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC				
2	PM10					
3	PM2.5					
4	SO2					
5	NOX					
6	CO					
May'2020						
1	SPM	392	427	479	382	
2	PM10	59.28	65.83	72.53	58.16	
3	PM2.5	44.17	50.41	54.53	43.61	
4	SO2	25.69	27.44	26.40	24.80	
5	NOX	22.90	25.25	25.01	23.86	
6	CO	696	856	685	595	
June'20						
1	SPM	402	449	485	398	
2	PM10	60.40	68.20	73.20	59.40	
3	PM2.5	46.10	52.70	55.60	45.20	
4	SO2	24.40	28.20	27.30	24.60	
5	NOX	23.60	24.90	26.20	24.20	
6	CO	705	875	775	628	

Annexure - II

July'20						
1	SPM	385	419	449	339	
2	PM10	55.70	64.60	68.90	53.80	
3	PM2.5	42.80	48.50	51.20	41.60	
4	SO2	26.40	26.60	24.80	23.20	
5	NOX	25.20	25.90	23.40	24.80	
6	CO	689	785	825	740	
August'20						
1	SPM	315	327	452	343	
2	PM10	46.60	52.80	59.90	51.70	
3	PM2.5	36.50	39.50	40.20	32.40	
4	SO2	20.60	22.80	22.90	23.20	
5	NOX	23.10	24.60	24.90	25.00	
6	CO	750	625	858	710	
September'20						
1	SPM	358	361	481	398	
2	PM10	53.50	54.72	69.85	59.39	
3	PM2.5	41.26	42.52	51.00	45.16	
4	SO2	16.94	21.65	27.30	24.58	
5	NOX	22.46	23.18	26.22	24.21	
6	CO	627	648	775	628	
Six monthly Average						
1	SPM	**370.4**	**396.6**	**469.2**	**372.0**	
2	PM10	**55.1**	**61.2**	**68.9**	**56.5**	
3	PM2.5	**42.2**	**25.3**	**25.7**	**24.1**	
4	SO2	**22.8**	**25.3**	**25.7**	**24.1**	
5	NOX	**23.5**	**24.8**	**25.1**	**24.4**	
6	CO	**693.4**	**757.8**	**783.6**	**660.4**	

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
W: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/596
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00044
Sample Description : Stack Emission
Date & Time of Sampling: 12.08.2020 at 09.30 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	: 62.2 m	
2.Diameter of the Stack at sampling point	: 2.24 m	
3.Area of Stack	: 3.94 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)	: 738	EPA Part 2
3.Velocity of gas (m/sec)	: 14.15	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 11.91	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

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
W: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/597
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00045
Sample Description : Stack Emission
Date & Time of Sampling: 11.08.2020 at 08.45 A.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)	: 734	EPA Part 2
3.Velocity of gas (m/sec)	: 9.64	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 17.0	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
Authorised Signatory

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN- U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/598
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00046
Sample Description : Stack Emission
Date & Time of Sampling: 10.08.2020 at 08.10 A.M
Sampling Location : Clinker Cooler (Line – 3)

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	: 45.3 m	
2.Diameter of the Stack at sampling point	: 3.5 m	
3.Area of Stack	: 9.61 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 112	EPA Part 2
2.Barometric pressure (mm of Hg)	: 734	EPA Part 2
3.Velocity of gas (m/sec)	: 9.80	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 15.0	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

Authorised Signatory

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/599
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00047
Sample Description : Stack Emission
Date & Time of Sampling: 12.08.2020 at 10.48 A.M.
Sampling Location : Cement Mill 2 (Line – 1)

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	: 35.0 m	
2.Diameter of the Stack at sampling point	: 1.1 m	
3.Area of Stack	: 0.502 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1. Temperature of emission (°C)	: 89	EPA Part 2
2.Barometric pressure (mm of Hg)	: 737	EPA Part 2
3.Velocity of gas (m/sec)	: 9.27	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 9.22	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

MITRA S.K. PVT. LTD.

Authorised Signatory

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
W: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/600
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00048
Sample Description : Stack Emission
Date & Time of Sampling: 11.08.2020 at 10.20 A.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)	: 91	EPA Part 2
2.Barometric pressure (mm of Hg)	: 739	EPA Part 2
3.Velocity of gas (m/sec)	: 9.67	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 11.0	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

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/601
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00049
Sample Description : Stack Emission
Date & Time of Sampling: 12.08.2020 at 12.15 P.M
Sampling Location : Cement Mill 4 (Line – 3)

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	: 60.0 m	
2.Diameter of the Stack at sampling point	: 2.8 m	
3.Area of Stack	: 6.15 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 95	EPA Part 2
2.Barometric pressure (mm of Hg)	: 738	EPA Part 2
3.Velocity of gas (m/sec)	: 9.70	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 14.42	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

MITRA S.K. PVT. LTD.

Authorised Signatory

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN. U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/602
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00050
Sample Description : Stack Emission
Date & Time of Sampling: 10.08.2020 at 09.40 A.M
Sampling Location : Packer I (Line - 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Packer I	
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)	: 10.64	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

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/603
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00051
Sample Description : Stack Emission
Date & Time of Sampling: 10.08.2020 at 11.30 A.M
Sampling Location : Packer 2 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack		
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. 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)	: 8.24	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

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/604
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00052
Sample Description : Stack Emission
Date & Time of Sampling: 10.08.2020 at 12.50 P.M
Sampling Location : Packer 3 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
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	
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)	: 10.47	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

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/605
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00053
Sample Description : Stack Emission
Date & Time of Sampling: 10.08.2020 at 2.10 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)	: 14.10	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

J.K. Cement WORKS, MANGROL (RAJ)

AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON

FOR UNIT-1 ,2 ,3,CPP,WHRS & TWONSHIP

(ALL VALUES IN MICROGRAMS / CUBIC METER)

(April' 2020 - September' 2020)

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR FACTORY GATE	NEAR COLONY GATE	Remarks
April'2020						
1	SPM	PLANT STOPPED ALL MONTH DUE TO COVID 19 PANDEMIC				
2	PM10					
3	PM2.5					
4	SO2					
5	NOX					
6	CO					
May'2020						
1	SPM	392	427	479	382	
2	PM10	59.28	65.83	72.53	58.16	
3	PM2.5	44.17	50.41	54.53	43.61	
4	SO2	25.69	27.44	26.40	24.80	
5	NOX	22.90	25.25	25.01	23.86	
6	CO	696	856	685	595	
June'20						
1	SPM	402	449	485	398	
2	PM10	60.40	68.20	73.20	59.40	
3	PM2.5	46.10	52.70	55.60	45.20	
4	SO2	24.40	28.20	27.30	24.60	
5	NOX	23.60	24.90	26.20	24.20	
6	CO	705	875	775	628	

Annexure - II

Annexure-II

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/190
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01115
Sample Description : Ambient Air
Sampling Location : Near Time Office
Date of Sampling : 12/13.06.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	61	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	45.6	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	17.9	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	29.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.72	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S.K. Pvt. Ltd.

MITRA S.K. PVT. LTD. RAJASTHAN

(Authorized Signatory)

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/191
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01116
Sample Description : Ambient Air
Sampling Location : Near Thermal Power Plant
Date of Sampling : 12/13.06.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	69.5	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	48.5	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	22.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	33.4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.80	IS 5182 :(Part-10) :1999

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

Checked by

For Mitra S. K. Pvt. Ltd.

(Authorized Signatory)

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/193
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01118
Sample Description : Ambient Air
Sampling Location : Near Colony Gate
Date of Sampling : 12/13.06.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	61.5	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	40	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	20.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	30.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.61	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S. K. Pvt. Ltd.

(Authorized Signatory)

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/192
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01117
Sample Description : Ambient Air
Sampling Location : Near Factory Gate
Date of Sampling : 12/13.06.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	73.5	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	49.9	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	21.6	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	29.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.78	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S. K. Pvt. Ltd.

(Authorized Signatory)

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/587
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00035
Sample Description : Ambient Air
Sampling Location : Near Colony Gate
Date of Sampling : 12.13.08.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	47.0	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	32.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	7.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	26.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.54	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S.K. Pvt. Ltd.

(Authorized Signatory)

Mitra S.K. Private Limited

TESTING ● INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/581
Date : 15.09.2020
Sample No. : MSKGL/ED/2020-21/09/00032
Sample Description : Ambient Air
Sampling Location : Near Time Office
Date of Sampling : 12/13.08.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	77.0	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	47.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	6.5	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	31.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.48	IS 5182 :(Part-10) :1999

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

Checked By

MITRA S.K. PVT. LTD.

(Authorised Signatory)

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020/21.585
Date : 15.09.2020
Sample No. : MSKGL-ED/2020-21/09/00033
Sample Description : Ambient Air
Sampling Location : Near Thermal Power Plant
Date of Sampling : 12/13.08.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	82.0	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	38.0	EPM MSK/ENV(AP)-01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	7.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	21.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.39	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S.K. Pvt. Ltd.

MITRA S.K. PVT. LTD.

(Authorised Signatory)

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/586
Date : 15.09.2020
Sample No. : MSKGL ED/2020-21/09/00034
Sample Description : Ambient Air
Sampling Location : Near Factory Gate
Date of Sampling : 12/13.08.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

Sl. No.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	58.0	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	41.0	IPM MSK-ENV(AP)-01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	7.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	24.1	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.46	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S.K. Pvt. Ltd.

(Authorised Signatory)

Annexure- III 01

राजस्थान सरकार
वन विभाग

कार्यालय संभागीय मुख्य वन संरक्षक, उदयपुर

वन भवन, मोहता पार्क के सामने, चेतक सर्किल, उदयपुर–313001
Email: ccf.udpur.forest@rajasthan.gov.in; Tel.no. 0294-2424748; Fax no..0294-2418137

क्रमांक एफ 5 ( )वसु/मुवसं/2020–21/5002 दिनांक :– 24.09.2020

निमित्,

अतिरिक्त प्रधान मुख्य वन संरक्षक,
प्रोटेक्शन एवं नोडल अधिकारी एफसीए,
राजस्थान, जयपुर।

विषयः–Request for approval of combined Wildlife Conservation Plan for six Scheduled I species Viz. Indian peafowl (Pavo cristatus) and Panther (Panthera pardus fusca), Rusty-spotted cat (prionailurus rubiginosus, Indian wolf (Cains lupus pallipes) Indian Monitor Lizard (Varanus bengalensis) and Indian Vulture (gyps indicus/gyps bengaliensis) proposed by J.K. Cement Works Nimbahera, J.K. Cement Works Mangrol Ahirpura Limestone Mine, Karunda Limestone Mine, Maliakhera Limestone Mine, Mangrol Limestone mine and Mangrol-Tilakhera Limestone Mine) Tehsil- Nimbahera, Dist- Chittorgarh (Rajasthan).

संदर्भ :–उप वन संरक्षक, चित्तौड़गढ का पत्र क्रमांक एफ( )सर्वे/उवस/2020–21/4172 दिनांक 29.6.2020 तथा 6048 दिनांक 23.09.2020 के कम में।

महोदय,

उपरोक्त विषयान्तर्गत संदर्भित पत्र से उप वन संरक्षक, चित्तौड़गढ ने उनके पत्र क्रमांक एफ ( )सर्वे / उवस/ 2020–21/4172 दिनांक 29.6.2020 एवं 6048 दिनांक 23.09.2020 से आलौच्य प्रकरण में वांछित Sch-I वन्यजीवों के संरक्षण के उद्देश्य से इस सम्भागाधीन उप वन संरक्षक, चित्तौडगढ के मार्गदर्शन में तैयार किया गया Wildlife Conservation Plan (WCP) इस कार्यालय को प्रेषित किया गया है।

अतः प्राप्त प्रस्ताव Wildlife Conservation Plan (WCP) को इस कार्यालय के सहमति के साथ मूल ही दो प्रतियों में सक्षम स्तर से अनुमोदित कराने हेतु संलग्न प्रेषित है।

संलग्नः– उपरोक्तानुसार। (मूल ही दो प्रतियों में)

भवदीय,

(आर.के.सिंह)
संभागीय मुख्य वन संरक्षक
उदयपुर।

क्रमांक पत्रा 5( )वसु/मुवसं/2020–21/ दिनांक :–

प्रतिलिपिः–निम्न को सूचनार्थ प्रेषित हैः–

1– उप वन संरक्षक, चित्तौड़गढ को उनके पत्रांक 4172 दिनांक 29.06.2020 तथा 6048 दिनांक 23.09.2020 के कम में।

2- Unit Head, J.K. Cement Works (J.K. Cement Nimbahera).

29/9/20

संभागीय मुख्य वन संरक्षक
उदयपुर।

Annexure- IV

राजस्थान सरकार

कार्यालय उप वन संरक्षक, चित्तौड़गढ़ (राज.)

(वन विभाग परिसर, प्रताप सर्किल, चित्तौड़गढ़-312001;Ph&Fax:01472-294001;email:dcfchittorforest@rajasthan.gov.in)

क्रमांक :– एफ ( )सर्वे/उवस/2020–21/6048 दिनांक :– 23.9.2020

निमित्त,

संभागीय मुख्य वन संरक्षक,
उदयपुर

विषय :– Request for approval of combined Wildlife Conservation Plan for six Scheduled-I species Viz. Indian peafowl (Pavo cristatus) & Panther (Panthera pardus fusca), Rusty-spotted cat (Prionailurus rubiginosus), Indian wolf (Cains lupus pallipes) Indian Monitor Lizard (Varanus bengalensis) and Indian Vulture (Gyps indicus/gyps bengaliensis) proposed by J.K. Cement Works(J.K. Cement, Nimbahera, J.K. Mangrol Cement plant, Ahirpura Limestone Mine, Karunda Limestone Mine, Maliakhera Limestone Mine, Mangrol Kimestone mine and Mangrol- Tilakhera Limestone Mine) Tehsil- Nimbahera, Dist- Chittorgarh (Rajasthan).

प्रसंग :– आपका का पत्र क्रमांक एफ 5 ( )वसु/ मुवसं/2020–21/4537 दिनांक 7.9.2020 के क्रम में।

महोदय,

उपरोक्त विषयान्तर्गत निवेदन है, कि प्रासंगिक पत्र से Wildlife Conservation Plan में लगाए गए आक्षेपों का बिन्दुवार प्रत्युत्तर निम्नानुसार प्रेषित है :–

क्र.सं.	आक्षेप	प्रत्युत्तर
(क)	1. जी.टी.शीट (10 किलोमीटर परिधि	जी.टी.शीट प्रमाणित कर दी गई है।
	2. List of flora and fauna (Annexure-IV)	फ्लोरा/फोना की सूची प्रमाणित कर दी गई है।
(ख)	भौतिक एवं वित्तीय प्रावधानों का उक्त क्षेत्र एवं वन्यजीवों के संरक्षण की दृष्टि से परीक्षण करें व तकनिकी रूप से उपयुक्त पाए जाने पर प्रमाणित कर प्रेषित करें।	भौतिक एवं वित्तीय प्रावधानों का उक्त क्षेत्र एवं वन्यजीवों के संरक्षण की दृष्टि से परीक्षण किया जाकर तकनिकी रूप से उपयुक्त पाई जाने पर प्रमाणित कर दी गई है।
(ग)	फ्लोरा/फोना की सूची में कुछ त्रुटियां है, जिन्हे चैक कर सही करावें।	फ्लोरा/फोना की सूची में त्रुटियों को सही कर दिया गया है तथा प्रथम अनुसूची के 6 प्रजातियों के लिए प्लान तैयार कर दिया गया है।
(घ)	यदि उक्त प्लान में तकनीकी रूप से वन्यजीवों के संरक्षण हेतु ओर कोई आईटम आप जोड़ना चाहते है तो तदनुसार कार्यवाही करें।	उक्त प्लान में तकनीकी रूप से वन्यजीवों के संरक्षण हेतु आवश्यकता अनुसार बिन्दु जोड़ दिए गए है।

उपरोक्त आक्षेपो की पूर्ति के पश्चात Wildlife Conservation Plan की 3 मूल प्रतियां पत्र के साथ संलग्न प्रेषित है।

संलग्न :– उपरोक्तानुसार

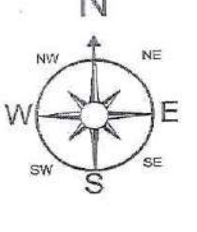
भवदीय

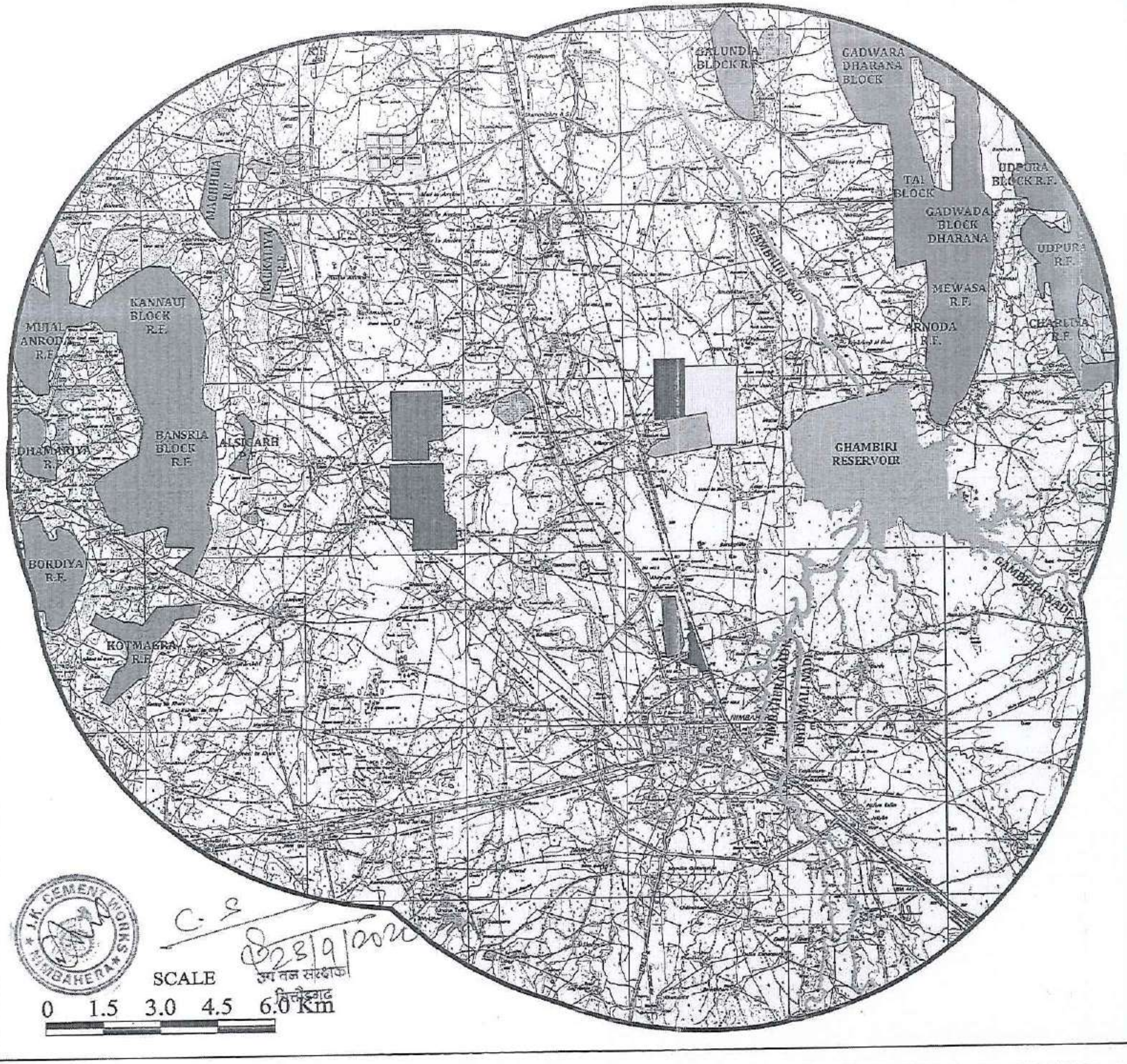
(सुगना राम जाट)
उप वन संरक्षक,
चित्तौड़गढ़
दिनांक :– 23.9.2020

क्रमांक :– एफ ( )सर्वे/उवस/2020–21/6049
प्रतिलिपि :– Unit Head, J.K. Cement Works(J.K. Cement, Nimbahera)

उप वन संरक्षक,
चित्तौड़गढ़

Appendix-II





LEGEND

Toposheet showing in 10 km radius of core & buffer zone of following units/ projects of the J K Cement Works

- Karunda Mine
- Maliakhera Mine
- Tilakhera Mine
- Ahirpura Mine
- Mangrol Mine
- Nimbahera Plant
- Mangrol Plant

There is no any ECO sensitive zone and No National park Karunda Mine, Maliakhera Mine, Tilakhera Mine, Ahirpura Mine, Mangrol Mine, Nimbahera Plant & Mangrol Plant. of the lease area and cement plants

There is no forest land within mine lease area and cement plants

J.K. CEMENT WORKS * NIMBAHERA *

C. S 28/9/2020

Annexure - V

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :
J.K. Cement Works Mangrol
Vill-Mangrol,Teh- Nimbahera,
Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2020-21/311
Date : 16.07.2020
Sample No. : MSKGL/ED/2020-21/06/01215
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 28.06.2020

Reference No.& Date : 4600064544 , dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	7.76
2.	Chloride as Cl	mg/l	1000	104.0
3.	Total Suspended solids	mg/l	100	<2.5
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	<2.0
5.	Chemical Oxygen Demand	mg/l	250	<4.0
6.	Oil & Grease	mg/l	10	<3.0
7.	Ammonical Nitrogen (as N)	mg/l	50	<0.1
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :
J.K. Cement Works Mangrol
Vill-Mangrol,Teh- Nimbahera.
Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2020-21/406
Date : 31.07.2020
Sample No. : MSKGL/ED/2020-21/07/00924
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 20.07.2020

Reference No.& Date : 4600064544 . dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25° C)	---	5.5 to 9.0	7.52
2.	Chloride as Cl	mg/l	1000	94.0
3.	Total Suspended solids	mg/l	100	<2.5
4.	Biological Oxidation Demand (3 days at 27° C)	mg/l	30	<2.0
5.	Chemical Oxygen Demand	mg/l	250	<4.0
6.	Oil & Grease	mg/l	10	<3.0
7.	Ammonical Nitrogen (as N)	mg/l	50	<0.1
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1

Report Prepared by :

For Mitra S.K. Private Limited

MITRA S.K. PVT. LTD. RAJASTHAN

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :
J.K. Cement Works Mangrol
Vill-Mangrol,Teh- Nimbahera,
Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2020-21/734
Date : 24.09.2020
Sample No. : MSKGL/ED/2020-21/08/00883
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 20.08.2020

Reference No.& Date : 4600064544 . dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25° C)	---	5.5 to 9.0	7.01
2.	Chloride as Cl	mg/l	1000	102.0
3.	Total Suspended solids	mg/l	100	<2.5
4.	Biological Oxidation Demand (3 days at 27° C)	mg/l	30	<2.0
5.	Chemical Oxygen Demand	mg/l	250	8.0
6.	Oil & Grease	mg/l	10	<3.0
7.	Ammonical Nitrogen (as N)	mg/l	50	<0.1
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1

Report Prepared by

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :
J.K. Cement Works Mangrol
Vill-Mangrol.Teh- Nimbahera.
Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2020-21/735
Date : 24.09.2020
Sample No. : MSKGL/ED/2020-21/09/00586
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 12.09.2020

Reference No.& Date : 4600064544 , dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	7.08
2.	Chloride as Cl	mg/l	1000	106.0
3.	Total Suspended solids	mg/l	100	<2.5
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	<2.0
5.	Chemical Oxygen Demand	mg/l	250	4.0
6.	Oil & Grease	mg/l	10	<3.0
7.	Ammonical Nitrogen (as N)	mg/l	50	1.80
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :
Thermax Ltd.
C/o J.K.Cement Works, Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/730
Date : 24.09.2020
Sample No. : MSKGL/ED/2020-21/09/00019
Sample Description : Treated Effluent Water
Sample Location : 10 MW WHR ETP (Mangrol)
Date of Collection : 11.08.2020

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	6.5 to 8.5	6.73
2.	Total Suspended solids (TSS)	mg/l	100	8.8
3.	Oil & Grease	mg/l	10	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	<0.05
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	^{0} C	Shall not exceed 5^0 C above the receiving water temperature	4^0 C higher than the intake water temperature
11.	Phosphate (as PO_4)	mg/l	5.0	<0.15
12.	Chemical Oxygen Demand as COD	mg/l	250.0	145
13.	Biological Oxygen Demand as BOD	mg/l	30.0	14.1

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

Name & Address of the Customer :
Thermax Ltd.
C/o J.K.Cement Works, Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/731
Date : 24.09.2020
Sample No. : MSKGL/ED/2020-21/09/00020
Sample Description : Treated Effluent Water
Sample Location : 25 MW CPP ETP (Mangrol)
Date of Collection : 30.08.2020

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	6.5 to 8.5	7.15
2.	Total Suspended solids (TSS)	mg/l	100	12
3.	Oil & Grease	mg/l	10	<2.0
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.08
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	^{0} C	Shall not exceed 5^0 C above the receiving water temperature	4^0 C higher than the intake water temperature
11.	Phosphate (as PO_4)	mg/l	5.0	<0.15
12.	Chemical Oxygen Demand as COD	mg/l	250.0	<5.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	3.5

Report Prepared by:

For Mitra S.K. Private Limited

Authorised Signatory

J.K. *Cement* WORKS, Mangrol (RAJ)

Noise Monitoring Report

Month	Mangrol Plant FY 2020-2021 (Unit - 1 , 2 & 3)							
	Near Time office		Near Thermal Power Plant		Near Factory Gate		Near Colony Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-20	64.5	52.4	68.2	56.7	70.2	59.8	62.8	52.8
May-20	63.9	56.3	69.4	57.9	72.1	58.4	64.3	52.6
Jun-20	65.8	54.7	70.1	58.3	69.6	56.8	66.7	55.4
Jul-20	64.9	56.2	67.5	56.1	68.8	57.7	68.5	53.8
Aug-20	66.4	56.7	69	57.2	69.7	57.9	67.4	56.1
Sep-20	69.3	57.4	67.8	54.6	70.2	58.2	65.9	54.7

Annexure- 8 VI

Annexure - VI

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

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

Report No. : MSK/UDR/2020-21/217
Date : 06.07.2020
Sample No. : MSKGL/ED/2020-21/06/01145 to 1148
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.	12/13.06.2020	Near Colony Gate (Mangrol Plant)	55.8	37.2 (40.2)
2.		Near Time Office (Mangrol Plant)	58.9	38.1 (42.5)
3.		Near Thermal Power Plant (Mangrol Plant)	68.0	40.6 (44.8)
4.		Near Factory Gate (Mangrol Plant)	69.6	41.4 (49.7)
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
MITRA S.K. PVT. LTD. RAJASTHAN
Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

Shrachi Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

T: 91 33 22172249 / 40143000 / 22650006 / 22650007
F: 91 33 22650008
E: info@mitrask.com
w: www.mitrask.com

TEST REPORT

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

Report No. : MSK/UDR/2020-21/753
Date : 30.09.2020
Sample No. : MSKGI/ED/2020-21/09/00068 to 00071
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.	12.08.2020	Near Colony Gate (Mangrol Plant)	66.7	48.4
2.		Near Time Office (Mangrol Plant)	65.3	55.6
3.		Near Thermal Power Plant (Mangrol Plant)	62.4	49.3
4.		Near Factory Gate (Mangrol Plant)	66.1	49.3
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

MITRA S.K. PVT. LTD.

Authorised Signatory

JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

MGR/PC/ESR/21 265

Date: 15.09.2020

O/C

To,
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area, Jhalana Dungri
JAIPUR – 302004 (Raj)

Subject: Environmental Statement Report for the year FY 2019-2020 of Cement Plant Line-1 of M/s J.K. Cement Works Mangrol, Tehsil: Nimbahera, Dist: Chittorgarh (Rajasthan).

Ref.: F (Tech) / Chittorgarh (Nimbahera)/ 1(1)/ 2008 – 2009 /9890-9892 Order No. 2017 – 2018 / CPM / 5102 dated 07.03.2018 & amended letter no. F(Tech)/RPCB/CPM/C-1970/1100, Dated 22/10/2018.

Dear Sir,

With reference to above subject matter, Please find enclosed herewith Environment Statement Report of Cement Plant Line-1 of J.K. Cement Works, Mangrol for the FY 2019-2020 for your reference and record. We trust you will find the same in order.

Thanking You.

Yours Faithfully
For J.K. Cement Works, Mangrol

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:

The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT

FORM - V

Environmental Statement for the financial year 2019-20, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**J.K. Cement Works, Mangrol** **Cement Plant (Unit-I)** C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code)** **Secondary - (STC Code)**	Primary
iii. Production capacity	Clinker : 0.75 MMTPA Cement : 0.95 MMTPA
iv. Year of establishment- (UNITWISE)	Grinding & packing unit started in the year 1995 & Clinker production started in Dec-2001
v. Date of last environmental statement submitted	25th September 2019

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m3/day

Process	: -	NIL	
Cooling	: -	140	m3/day
Domestic	: -	35	m3/day

Name of products	Process water consumption per unit of products (For cooling & domestic)	
	During the previous financial year (2018-19) (KL/MT)	During the current financial year (2019-20) (KL/MT)
1. CEMENT	0.042	0.062

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output (in MT)	
		During the previous financial year (2018-19)	During the current financial year (2019-20)
Limestone	Clinker	1.036	1.346
Laterite / Red ocher		0.075	0.124
Coal		0.0191	0.022
Petcock		0.0845	0.0830
Alternative Fuel Replacement & Alternative Raw Material		NA	0.0247*
Gypsum	Cement	0.066	0.072
Flyash% of OPC + PPC		0.138	0.031
Flyash% of PPC		0.277	0.222
Alternative Raw Material & Performance improver		NA	0.0304

* AFR & Alternative Raw Material consumption for clinker production is combined for Unit-1, 2 & 3.

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	Cement plant is being operated on dry process technology, hence no liquid effluent is generated. Domestic waste water generated from the office toilet and canteen is being treated in STP and treated water used in plantation & horticulture purpose within the premises.		
(b) Air	**Stack Emission (yearly average)**		
PM	**0.143**	**14.9**	**-49.66 %**
SO2	**1.643**	**15.97**	**-15.97 %**
NOx	**38.94**	**347.63**	**-43.45 %**

Ambient Air Quality (yearly average) in µg/m³

Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO (in mg/m3)
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

STP treated water quality data

STP treated water Quality		
Parameters	**Standards**	**Average results of YTD**
pH	Between 5.5 to 9.0	7.08
Total Suspended solids	Not to exceed 100 mg/l	4.95
Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.7
Chemical Oxygen Demand	Not to exceed 250 mg/l	12.48
Oil & Grease	Not to exceed 10 mg/l	<2.46
Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.05
Sulphide (as S)	Not to exceed 2.0 mg/l	0.1
Total Residual Chlorine	Not to exceed 1.0 mg/l	0.1

Noise level monitoring data

Month	Noise Monitoring Report FY 2019-20							
	Near Time office		Near Thermal Power Plant		Near Raw material Gate		Near Packing Plant Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	71.8	61.4	67.8	57.2	71.8	61.4	67.8	57.2
May-19	69.9	60.8	69.2	59.1	69.9	60.8	69.2	59.1
Jun-19	71.6	61.2	70.0	60.4	71.6	61.2	70.0	60.4
Jul-19	70.5	60.5	68.9	58.1	70.5	60.5	68.9	58.1
Aug-19	69.7	59.9	69.9	59.6	69.7	59.9	69.9	59.6
Sep-19	71.0	61.1	68.5	58.2	71.0	61.1	68.5	58.2
Oct-19	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
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
YTD	**69.2**	**59.3**	**68.7**	**58.6**	**69.9**	**59.2**	**69.8**	**59.1**

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	**During current financial year (2019-20) (KL)**
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony. Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E

SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	**During current financial year (2019-20) (MT/Year)**
(a)	**From process**	**Nil**	**Nil**
(b)	**From pollution control facility**	Dust collected in ESP, bag house and bag filters are recycled to the system	Dust collected in ESP, bag house and bag filters are recycled to the system
(c)	**Quantity reutilized with in the unit**	100%	100%

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

1) Hazardous waste generated in the form of used / spent oil, waste / residue containing oil, which is stored in barrels at safe & dedicated area and sold to recycler approved by Central Pollution Control Board.
2) Dust collected from pollution control equipment's (i.e. from ESP, Bag house and Bag filter) is totally recycled in the process.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Cement manufacturing is a dry process technology, hence no effluent generated from process. Which is cost effective and environmentally clean technology. The advantage of dry process is also in fuel economy. The stack emissions from the plant are controlled by equipment like ESPs and Bag filters installed at various material transfer points to arrest the fugitive emissions. The particulate matter collected from the pollution control equipment is recycled in process and optimizing the cost of operation of pollution control equipment, conserving natural raw material and hence no impact on the environment.

PART-H

ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

1) Conducted 3rd party monitoring of leachate testing for soil contamination in AFR storage yard.

2) SNCR system installed to control the NOx emission.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Monitoring of stack emission and ambient air and water quality is being done regularly as mentioned in consent to operate.
2) 4 nos. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed at periphery of the plant.
3) Continuous Emission Monitoring Systems (CEMS) for PM, SO2 & NOx have been installed at stack of Kiln section and for monitoring of PM emission CEMS has installed at stack coal mill, cooler & cement mill and real time data transfer to RSPCB & CPCB.
4) Bag filters have been installed at various material transfer points to control fugitive emission.

5) Cement being manufacturing in dry process and there is no any effluent generated from the process hence maintaining Zero Effluent Discharge unit.
6) Apart from this fly ash purchased from nearby thermal power plant and use for cement production.
7) Raw materials are storage in covered shed, product in closed silo with high efficient bag filters for fugitive dust emission control.
8) To utilization of waste heat, Waste heat recovery system has been installed to generate green power.
9) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
10) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
11) Cover shed Constructed to store the raw material, to avoid fugitive emission. Finish product stored in closed silo.
12) All Belt Conveyor belt are fully covered & also installed Bag filter at all material transfer points
13) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
14) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
15) Telemetry system installed for online ground water level monitoring.
16) Total 4800 sapling planted in the FY 2019-20.
17) More than 33 % area covered with green belt.

****

JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

MGR/PC/ESR/21 266

Date: 15.09.2020

O/C

To,
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area, Jhalana Dungri
JAIPUR – 302004 (Raj)

Subject: Environmental Statement Report for the year FY 2019-2020 of Cement Plant Line-2 of M/s J.K. Cement Works Mangrol, Tehsil: Nimbahera, Dist.: Chittorgarh (Rajasthan).

Ref.: F (CPM) / Chittorgarh (Nimbahera)/ 10(1)/ 2017 – 2018 /6190-6192 Order No. 2017 – 2018 / CPM / 4990 dated 03.10.2017 & amendment letter no. F(Tech) RPCB/CPM/(C-11)/2052 dated 25/01/2018 & 22/10/2018.

Dear Sir,

With reference to above subject matter, please find enclosed herewith Environment Statement Report of Cement Plant Line-2 of J. K. Cement Works, Mangrol for the FY 2019-2020 for your reference and record. We trust you will find the same in order.

Thanking You.

Yours Faithfully
For J.K. Cement Works, Mangrol

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:

The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT

FORM - V

Environmental Statement for the financial year 2019-2020, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**J.K. Cement Works, Mangrol Cement Plant (Unit-II)** C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code)** **Secondary - (STC Code)**	Primary
iii. Production capacity	Clinker : 2.15 MMTPA Cement : 2.50 MMTPA
iv. Year of establishment-	Year 2014
v. Date of last environmental statement submitted	25th September 2019

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m3/day

Process	**: -**	NIL
Cooling	: -	940 m3/day
Domestic	: -	20 m3/day

Name of products	**Process water consumption per unit of products (For cooling & domestic)**	
	During the previous financial year (2018-19) (KL/MT)	**During the current financial year (2019-20) (KL/MT)**
1. CEMENT	0.049	0.053

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2018-19)	During the current financial year (2019-20)
Limestone	Clinker	1.036	1.419
Laterite / Redocher		0.075	0.175
Coal		0.0140	0.0141
Petcoke		0.0802	0.0793
Alternative Fuel Replacement & Alternative Raw Material		NA	0.0247*
Gypsum	Cement	0.066	0.067
Flyash% of OPC + PPC		0.138	0.183
Flyash% of PPC		0.277	0.273
Alternative Raw Material & Performance improver		NA	0.0556

* AFR & Alternative Raw Material consumption for clinker production is combined for Unit-1, 2 & 3.

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	Cement plant is being operated on dry process technology, hence no liquid effluent is generated. Domestic waste water generated from the office toilet and canteen is being treated in STP and treated water used in plantation & horticulture purpose within the premises.		
(b) Air	**Stack Emission (yearly average)**		
PM	0.410	14.3	- 47.66%
SO2	2.104	6.88	-6.88 %
NOx	150.91	522.73	- 65.34 %

Ambient Air Quality (yearly average) in µg/m³					
Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO (in mg/m³)
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

STP treated water quality data

STP treated water Quality		
Parameters	**Standards**	**Average results of YTD**
pH	Between 5.5 to 9.0	7.08
Total Suspended solids	Not to exceed 100 mg/l	4.95
Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.7
Chemical Oxygen Demand	Not to exceed 250 mg/l	12.48
Oil & Grease	Not to exceed 10 mg/l	<2.46
Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.05
Total Residual Chlorine	Not to exceed 1.0 mg/l	0.1

Noise level monitoring data

Month	Noise Monitoring Report FY 2019-20							
	Near Time office		Near Thermal Power Plant		Near Raw material Gate		Near Packing Plant Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	71.8	61.4	67.8	57.2	71.8	61.4	67.8	57.2
May-19	69.9	60.8	69.2	59.1	69.9	60.8	69.2	59.1
Jun-19	71.6	61.2	70.0	60.4	71.6	61.2	70.0	60.4
Jul-19	70.5	60.5	68.9	58.1	70.5	60.5	68.9	58.1
Aug-19	69.7	59.9	69.9	59.6	69.7	59.9	69.9	59.6
Sep-19	71.0	61.1	68.5	58.2	71.0	61.1	68.5	58.2
Oct-19	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
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
YTD	**69.2**	**59.3**	**68.7**	**58.6**	**69.9**	**59.2**	**69.8**	**59.1**

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	During current financial year (2019-20) (KL)
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony . Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E

SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	During current financial year (2019-20) (MT/Year)
(a)	**From process**	**Nil**	**Nil**
(b)	**From pollution control facility**	Dust collected in ESP, bag house and bag filters are recycled to the system	Dust collected in ESP, bag house and bag filters are recycled to the system
(c)	**Quantity reutilized with in the unit**	100%	100%

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

1) Hazardous waste generated in the form of used / spent oil, waste / residue containing oil, which is stored in barrels at safe & dedicated area and sold to recycler approved by Central Pollution Control Board.
2) Dust collected from pollution control equipment's (i.e. from ESP, Bag house and Bag filter) is totally recycled in the process.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Cement manufacturing is a dry process technology, hence no effluent generated from process. Which is cost effective and environmentally clean technology. The advantage of dry process is also in fuel economy. The stack emissions from the plant are controlled by equipment like ESPs and Bag filters installed at various material transfer points to arrest the fugitive emissions. The particulate matter collected from the pollution control equipment is recycled in process and optimizing the cost of operation of pollution control equipment, conserving natural raw material and hence no impact on the environment.

PART-H

ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

1) Conducted 3rd party monitoring of leachate testing for soil contamination in AFR storage yard.

2) SNCR system installed to control the NOx emission.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Monitoring of stack emission and ambient air and water quality is being done regularly as mentioned in consent to operate.
2) 4 nos. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed at periphery of the plant.
3) Continuous Emission Monitoring Systems (CEMS) for PM, SO2 & NOx have been installed at stack of Kiln section and for monitoring of PM emission CEMS has installed at stack coal mill, cooler & cement mill and real time data transfer to RSPCB & CPCB.
4) Bag filters have been installed at various material transfer points to control fugitive emission.

5) Cement being manufacturing in dry process and there is no any effluent generated from the process hence maintaining Zero Effluent Discharge unit.

6) Apart from this fly ash purchased from nearby thermal power plant and use for cement production.
7) Raw materials are storage in covered shed, product in closed silo with high efficient bag filters for fugitive dust emission control.
8) To utilization of waste heat, Waste heat recovery system has been installed to generate green power.
9) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
10) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
11) Cover shed Constructed to store the raw material, to avoid fugitive emission. Finish product stored in closed silo.
12) All Belt Conveyor belt are fully covered & also installed Bag filter at all material transfer points
13) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
14) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
15) Telemetry system installed for online ground water level monitoring.
16) Total 4800 sapling planted in the FY 2019-20.
17) More than 33 % area covered with green belt.

****

JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

MGR/PC/ESR/21 267

Date: 15.09.2020

O/C

To,
The Member Secretary,
Rajasthan State Pollution Control Board 4,
Industrial Area, Jhalaya Dungri
JAIPUR – 302004 (Raj)

Subject: Environmental Statement Report for the year FY 2019-2020 of Cement Plant Line-3 with additive crusher (02 Nos.) of M/s J. K. Cement Works Mangrol, Tehsil: Nimbahera, Dist.: Chittorgarh (Rajasthan).

Ref.: F(CPM)/Chittorgarh(Nimbahera)/11(1)/2018-2019/2188-2190, Order No: 2019-2020/CPM/5515, Dated 27/09/2019.
F(CPM)/Chittorgarh(Nimbahera)/11(1)/2018-2019/3535-3538, Order No: 2019-2020/CPM/5588, Dated 03/01/2020.

Dear Sir,

With reference to above subject matter, please find enclosed herewith Environment Statement Report of Cement Plant Line-3 with additive crusher (02 Nos.) of J.K. Cement Works, Mangrol for the FY 2019-2020 for your reference and record. We trust you will find the same in order.

Thanking You.

Yours Faithfully
For J.K. Cement Works, Mangrol

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:
The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT

FORM - V

Environmental Statement for the financial year 2019-20, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**J.K. Cement Works, Mangrol** **Cement Plant (Unit-III) with additive crusher (02 Nos.)** C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code)** **Secondary - (STC Code)**	Primary
iii. Production capacity	Clinker : 2.75 MMTPA Cement : 3.60 MMTPA
iv. Year of establishment	Plant commissioned on dated 29/09/2019
v. Date of last environmental statement submitted	Not applicable

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m3/day

Process:	: -	NIL
Cooling	: -	990 m3/day
Domestic	: -	10 m3/day

Name of products	Process water consumption per unit of products (For cooling & domestic)	
	During the previous financial year (2018-19) (KL/MT)	During the current financial year (2019-20) (KL/MT)
1. CEMENT	Plant was not commissioned	0.052

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output (in MT)	
		During the previous financial year (2018-19)	During the current financial year (2019-20)
Limestone	Clinker	NA*	1.37
Laterite / Red ocher		NA*	0.159
Coal		NA*	0.0132
Petcock		NA*	0.0941
Alternative Fuel Replacement & Alternative Raw Material		NA*	0.0247
Gypsum	Cement	NA*	0.063
Flyash% of OPC + PPC		NA*	0.152
Flyash% of PPC		NA*	0.281
Alternative Raw Material & Performance improver		NA*	0.0101

***** Plant was commissioned on dated 29/09/2019.

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	As the plant is being operated on dry process technology, no liquid effluent is generated from cement plant. The Domestic waste water generated from the office toilet and canteen being treated with STP and treated water used in greenery development in the plant premises.		
(b) Air	**Stack Emission (yearly average)**		
PM	0.373	12.825	-42.75 %
SO2	10.02	45.09	-45.09 %
NOx	82.262	367.86	-61.31 %

Ambient Air Quality (yearly average) in µg/m³

Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO(in mg/m³)
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

STP treated water quality data

STP treated water Quality		
Parameters	**Standards**	**Average results of YTD**
pH	Between 5.5 to 9.0	7.08
Total Suspended solids	Not to exceed 100 mg/l	4.95
Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.7
Chemical Oxygen Demand	Not to exceed 250 mg/l	12.48
Oil & Grease	Not to exceed 10 mg/l	<2.46
Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.05

Noise level monitoring data

Month	Noise Monitoring Report FY 2019-20							
	Near Time office		Near Thermal Power Plant		Near Raw material Gate		Near Packing Plant Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	71.8	61.4	67.8	57.2	71.8	61.4	67.8	57.2
May-19	69.9	60.8	69.2	59.1	69.9	60.8	69.2	59.1
Jun-19	71.6	61.2	70.0	60.4	71.6	61.2	70.0	60.4
Jul-19	70.5	60.5	68.9	58.1	70.5	60.5	68.9	58.1
Aug-19	69.7	59.9	69.9	59.6	69.7	59.9	69.9	59.6
Sep-19	71.0	61.1	68.5	58.2	71.0	61.1	68.5	58.2
Oct-19	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
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
YTD	**69.2**	**59.3**	**68.7**	**58.6**	**69.9**	**59.2**	**69.8**	**59.1**

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	During current financial year (2019-20) (KL)
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony. Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E

SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	During current financial year (2019-20) (MT/Year)
(a)	**From process**	**Nil**	**Nil**
(b)	**From pollution control facility**	Dust collected in ESP, bag house and bag filters are recycled to the system	Dust collected in ESP, bag house and bag filters are recycled to the system
(c)	**Quantity reutilized with in the unit**	100%	100%

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

1) Hazardous waste generated in the form of used / spent oil, waste / residue containing oil, which is stored in barrels at safe & dedicated area and sold to recycler approved by Central Pollution Control Board.
2) Dust collected from pollution control equipment's (i.e. from ESP, Bag house and Bag filter) is totally recycled in the process.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Cement manufacturing is a dry process technology, hence no effluent generated from process. Which is cost effective and environmentally clean technology. The advantage of dry process is also in fuel economy. The stack emissions from the plant are controlled by equipment like ESPs and Bag filters installed at various material transfer points to arrest the fugitive emissions. The particulate matter collected from the pollution control equipment is recycled in process and optimizing the cost of operation of pollution control equipment, conserving natural raw material and hence no impact on the environment.

PART-H

ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

1) Conducted 3rd party monitoring of leachate testing for soil contamination in AFR storage yard.

2) SNCR system installed to control the NOx emission.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Monitoring of stack emission and ambient air and water quality is being done regularly as mentioned in consent to operate.
2) 4 nos. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed at periphery of the plant.
3) Continuous Emission Monitoring Systems (CEMS) for PM, SO2 & NOx have been installed at stack of Kiln section and for monitoring of PM emission CEMS has installed at stack coal mill, cooler & cement mill and real time data transfer to RSPCB & CPCB.
4) Bag filters have been installed at various material transfer points to control fugitive emission.

5) Cement being manufacturing in dry process and there is no any effluent generated from the process hence maintaining Zero Effluent Discharge unit.
6) Apart from this fly ash purchased from nearby thermal power plant and use for cement production.
7) Raw materials are storage in covered shed, product in closed silo with high efficient bag filters for fugitive dust emission control.
8) To utilization of waste heat, Waste heat recovery system has been installed to generate green power.
9) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
10) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
11) Cover shed Constructed to store the raw material, to avoid fugitive emission. Finish product stored in closed silo.
12) All Belt Conveyor belt are fully covered & also installed Bag filter at all material transfer points
13) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
14) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
15) Telemetry system installed for online ground water level monitoring.
16) Total 4800 sapling planted in the FY 2019-20.
17) More than 33 % area covered with green belt.

JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

MGR/PC/ESR/21 264

Date: 15.09.2020

To,
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area, Jhalana Dungri
JAIPUR – 302004 (Raj)

Subject: Environmental Statement Report for the FY 2019-2020 of Power Plant (25 MW) of M/s J.K. Cement Works, Mangrol, Tehsil: Nimbahera, Dist : Chittorgarh (Rajasthan).

Ref.:F(Tech)/Chittorgarh(Nimbahera)/1(1)/2008-2009/1521-1523 & Order No 2017-2018/CPM/4862, Dated 30/05/2017.

Dear Sir,

With reference to above subject matter, Please find enclosed herewith Environment Statement Report of Power Plant (25MW) of M/s J.K. Cement Works, Mangrol for the FY 2019-2020 for your reference and record. We trust you will find the same in order.

Thanking you.

Yours Faithfully
For J.K. Cement Works, Mangrol

O/C

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:
The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT

FORM - V

Environmental Statement for the financial year 2019-2020, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**25 MW Captive Power Plant** **J. K. Cement Works, Mangrol** C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code), Secondary - (STC Code)**	Primary
iii. Production capacity	25 MW Power Generation
iv. Year of establishment-	Year 2014
v. Date of last environmental statement submitted	25th September 2019

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m^3/day

Process : - Nil

Cooling : - 300 m^3/day

Domestic : - 5 m^3/day

Name of products	Process water consumption per unit of products	
	During the previous financial year (2018-19) (KL/MWh)	During the current financial year (2019-20) (KL/MWh)
1. POWER	**0.46**	**0.40**

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2018-19) (MT/MWh)	During the current financial year (2019-20)(MT/MWh)
Coal	**Power (Electricity)**	0.5984	0.705

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	Effluent waste water generated from blow down of cooling tower and DM plant waste water treated in neutralization pit as prescribed by Rajasthan State Pollution Control Board and treated water is being utilized in cement plant in cooling purpose, hence maintaining Zero Liquid Discharge unit.		
(b) Air	**Stack Emission**		
PM	0.106	16.0	- 32 %
SO2	21.385	145.22	- 24.20 %
NOX	13.709	91.2	- 30.4 %

Ambient Air Quality (yearly average) in µg/m³

Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO (in mg/m³)
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

STP treated water quality data

STP treated water Quality		
Parameters	**Standards**	**Average results of YTD**
pH	Between 5.5 to 9.0	7.08
Total Suspended solids	Not to exceed 100 mg/l	4.95
Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.7
Chemical Oxygen Demand	Not to exceed 250 mg/l	12.48
Oil & Grease	Not to exceed 10 mg/l	< 2.46
Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.05
Sulphide (as S)	Not to exceed 2.0 mg/l	0.1
Total Residual Chlorine	Not to exceed 1.0 mg/l	0.1

Treated water quality of Neutralization pit data

Treated water quality of Neutralization pit		
Parameters	**Standards**	**Average of YTD**
Total Suspended Solids	Not to exceed 100 mg/L	32.37
Oil & Grease	Not to exceed 10 mg/L	1.52
Biochemical Oxygen Demand (3 days at 27° C)	Not to exceed 30 mg/l	7.13
Free available Chlorine	Not to exceed 0.5 mg/l	0.1
PH	Between 6.5 to 8.5	7.17
Temperature	Shall not exceed 5° C above the receiving water temperature	4 oC higher than the intake water temperature
Copper (as Cu)	Not to exceed 1.0 mg/l	0.016
Zinc (as Zn)	Not to exceed 1.0 mg/l	0.0325
Total Chromium (as Cr)	Not to exceed 0.2 mg/l	0.00616
Iron (as Fe)	Not to exceed 1.0 mg/l	0.26
Chemical Oxygen Demand	Not to exceed 250 mg/l	35.75
Phosphate (as P)	Not to exceed 5.0 mg/l	1.32

Noise level monitoring data

Month	Noise Monitoring Report FY 2019-20							
	Near Time office		Near Thermal Power Plant		Near Raw material Gate		Near Packing Plant Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	71.8	61.4	67.8	57.2	71.8	61.4	67.8	57.2
May-19	69.9	60.8	69.2	59.1	69.9	60.8	69.2	59.1
Jun-19	71.6	61.2	70.0	60.4	71.6	61.2	70.0	60.4
Jul-19	70.5	60.5	68.9	58.1	70.5	60.5	68.9	58.1
Aug-19	69.7	59.9	69.9	59.6	69.7	59.9	69.9	59.6
Sep-19	71.0	61.1	68.5	58.2	71.0	61.1	68.5	58.2
Oct-19	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
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
YTD	**69.2**	**59.3**	**68.7**	**58.6**	**69.9**	**59.2**	**69.8**	**59.1**

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	**During current financial year (2019-20) (KL)**
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony. Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E
SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	**During current financial year (2019-20) (MT/Year)**
(a)	**From process (Bed Ash)**	8458	6262.34
(b)	**From pollution control facility (Fly Ash)**	29634	33357.41
(c)	**Quantity reutilized with in the unit**	99.01 %	99.38 %

Fly ash collected in pollution control equipment (ESP) is utilized for PPC grade cement manufacturing in own cement plant within the premises & bed ash generated from process in also utilized for cement manufacturing and coal dust collected from bag filters is recycled into the system.

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

1) Hazardous waste generated in the form of used / spent oil, waste / residue containing oil, which is stored in barrels at safe & dedicated area and sold to recycler approved by Central Pollution Control Board.
2) Fly ash collected in pollution control equipment (ESP) is utilized for PPC grade cement manufacturing in own cement plant within the premises & bed ash generated from process in also utilized for cement manufacturing and coal dust collected from bag filters is recycled into the system.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Industry has installed electrostatic precipitator (ESP) at boiler for stack and bag filters at transfer points to control the particulate matter and fugitive emission. The particulate matter collected from ESP in the form of fly ash is completely utilized in PPC cement production.

PART-H

ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

Installed new technology NOx and SO2 analyzer to provide real time emission data and same is being transferred to RSPCB and CPCB web portal.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Monitoring of stack emission and ambient air and water quality is being done regularly as mentioned in consent to operate.
2) 4 nos. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed at periphery of the plant.
3) Continuous Emission Monitoring Systems (CEMS) for PM, SO2 & NOx have been installed at the Boiler ESP stack and real time data transfer to RSPCB & CPCB.
4) Bag filters have been installed at various material transfer points to control fugitive emission.
5) Effluent generated from the cooling tower blow down and DM plant waste water is being treated through neutralization and used in cement plant for cooling purpose, hence maintaining Zero Liquid Discharge Unit (ZLD).
6) Air cooled condenser installed.
7) Fly ash generated from CPP,convey through pneumatic system and stored in silo, and utilized in own cement plant for PPC cement production.
8) Apart from this fly ash purchased from nearby thermal power plant and use for cement production.
9) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
10) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
11) Cover shed Constructed to store the coal, to avoid fugitive emission.
12) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
13) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
14) Telemetry system installed for online ground water level monitoring.
15) Total 4800 sapling planted in the FY 2019-20.
16) More than 33 % area covered with green belt.

****

JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

MGR/PC/ESR/21 269

Date: 15.09.2020

To,
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area, Jhalana Dungri
JAIPUR – 302004 (Raj)

Subject: Environmental Statement Report for the FY 2019-2020 of Waste Heat Recovery Power Plant (10 MW) of M/s J. K. Cement Works, Mangrol, Tehsil: Nimbahera, Dist : Chittorgarh (Rajasthan).

Ref.:F(Tech)/CHITTORGARH(NIMBAHERA)/1(1)/2008-2009/1530-1532, Order no. 2017-2018/CPM/4863, Dated 30/05/2017.

Dear Sir,

With reference to above subject matter, Please find enclosed herewith Environment Statement Report of Waste Heat Recovery Power Plant (10 MW) of M/s J. K. Cement Works, Mangrol for the FY 2019-2020 for your kind reference and record. We trust you will find the same in order.

Thanking You.

O/C

Yours Faithfully
For J.K. Cement Works, Mangrol

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:
The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT
FORM - V

Environmental Statement for the financial year 2019-20, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**J.K. Cement Works, Mangrol** **10 MW Waste Heat Recovery System** C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code)** **Secondary - (STC Code)**	Primary
iii. Production capacity	10 MW power generation
iv. Year of establishment-	Year 2014
v. Date of last environmental statement submitted	25th-September- 2019

PART-B
WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m^3/day

Process : - Nil
Cooling : - 225 m^3/day
Domestic : - 5 m^3/day

Name of products	Process water consumption per unit of products (For cooling & domestic)	
	During the previous financial year (2018-19) (KL/MWh)	During the current financial year (2019-20) (KL/MWh)
1. Power (Electricity)	0.81	0.82

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2018-19)	During the current financial year (2019-20)
Waste hot gases from Kiln & Cooler	**Power (Electricity)**	Waste heat recovered from Kiln-1, Kiln-2 ,Cooler -1 & Cooler -2 (Waste hot gases depends up on availability)	

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	Effluent waste water generated from blow down of cooling tower and DM plant waste water treated in neutralization pit as prescribed by Rajasthan State Pollution Control Board and treated water is being utilized in cement plant in cooling purpose, hence maintaining Zero Liquid Discharge unit.		
(b) Air	**Waste heat recovery power plant has no any stack , hence it is not applicable**		

Ambient Air Quality (yearly average) in µg/m³

Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO (in mg/m³)
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

STP treated water quality data

STP treated water Quality		
Parameters	**Standards**	**Average results of YTD**
pH	Between 5.5 to 9.0	7.08
Total Suspended solids	Not to exceed 100 mg/l	4.95
Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.7
Chemical Oxygen Demand	Not to exceed 250 mg/l	12.48
Oil & Grease	Not to exceed 10 mg/l	<2.46
Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.05
Sulphide (as S)	Not to exceed 2.0 mg/l	0.1
Total Residual Chlorine	Not to exceed 1.0 mg/l	0.1

Treated water quality of Neutralization pit data

Treated water quality of Neutralization pit		
Parameters	**Standards**	**Average of YTD**
Total Suspended Solids	Not to exceed 100 mg/L	43.40
Oil & Grease	Not to exceed 10 mg/L	1.63
Biochemical Oxygen Demand (3 days at 27° C)	Not to exceed 30 mg/l	6.13
Free available Chlorine	Not to exceed 0.5 mg/l	0.11
PH	Between 6.5 to 8.5	7.30
Temperature	Shall not exceed 5° C above the receiving water temperature	4 oC higher than the intake water temperature
Copper (as Cu)	Not to exceed 1.0 mg/l	0.09
Zinc (as Zn)	Not to exceed 1.0 mg/l	0.02
Total Chromium (as Cr)	Not to exceed 0.2 mg/l	0.02
Iron (as Fe)	Not to exceed 1.0 mg/l	0.43
Chemical Oxygen Demand	Not to exceed 250 mg/l	28.35
Phosphate (as P)	Not to exceed 5.0 mg/l	1.51

Noise level monitoring data

Month	Noise Monitoring Report FY 2019-20							
	Near Time office		Near Thermal Power Plant		Near Raw material Gate		Near Packing Plant Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	71.8	61.4	67.8	57.2	71.8	61.4	67.8	57.2
May-19	69.9	60.8	69.2	59.1	69.9	60.8	69.2	59.1
Jun-19	71.6	61.2	70.0	60.4	71.6	61.2	70.0	60.4
Jul-19	70.5	60.5	68.9	58.1	70.5	60.5	68.9	58.1
Aug-19	69.7	59.9	69.9	59.6	69.7	59.9	69.9	59.6
Sep-19	71.0	61.1	68.5	58.2	71.0	61.1	68.5	58.2
Oct-19	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
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
YTD	**69.2**	**59.3**	**68.7**	**58.6**	**69.9**	**59.2**	**69.8**	**59.1**

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	During current financial year (2019-20) (KL)
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony. Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E
SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	**During current financial year (2019-20) (MT/Year)**
(a)	**From process**	Not applicable	Not applicable
(b)	**From pollution control facility**	Not applicable	Not applicable
(c)	**Quantity reutilized with in the unit**	Not applicable	Not applicable

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

1) Hazardous waste generated in the form of used / spent oil, waste / residue containing oil, which is stored in barrels at safe & dedicated area and sold to recycler approved by Central Pollution Control Board.
2) Waste hot gas release from Kiln & Cooler section totally use for power generation by WHRS.
3) Effluent waste water generated from blow down of cooling tower and DM plant waste water treated in neutralization pit as prescribed by Rajasthan State Pollution Control Board and treated water is being utilized in cement plant in cooling purpose, hence maintaining Zero Liquid Discharge unit.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Industry have installed neutralization pit for proper treatment of trade effluent & treated water quality meet the norms prescribed by Rajasthan State Pollution Control Board. Treated water is being utilized in process and machinery cooling purposes.

PART-H

ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

1) Air Cooled condenser installed.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Effluent water quality monitoring is being done regularly as mentioned in consent to operate.
2) 4 nos. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed at periphery of the plant.
3) Effluent generated from the cooling tower blow down and DM plant waste water is being treated through neutralization and used in cement plant for cooling purpose, hence maintaining Zero Liquid Discharge Unit (ZLD).
4) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
5) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
6) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
7) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
8) Telemetry system installed for online ground water level monitoring.
9) Total 4800 sapling planted in the FY 2019-20.
10) More than 33 % area covered with green belt.

****

O/C

JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

MGR/PC/ESR/21 277

Date: 15.09.2020

To,
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area, Jhalana Dungri
JAIPUR – 302004 (Raj)

Subject: Environmental Statement Report for the FY 2019-2020 of Waste Heat Recovery Power Plant (29.1 MW) of M/s J. K. Cement Works, Mangrol, Tehsil: Nimbahera, Dist: Chittorgarh (Rajasthan).

Ref.:F(Tech)/CHITTORGARH(NIMBAHERA)/11(1)/2018-2019/4400-4402, Order no. 2019 2020/CPM/5599, Dated 04/02/2020.

Dear Sir,

With reference to above subject matter, Please find enclosed herewith Environment Statement Report of Waste Heat Recovery Power Plant (29.1 MW) of M/s J. K. Cement Works, Mangrol for the FY 2019-2020 for your kind reference and record. We trust you will find the same in order.

Thanking You.

Yours Faithfully
For J.K. Cement Works, Mangrol

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:
The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT
FORM - V

Environmental Statement for the financial year 2019-20, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**J.K. Cement Works, Mangrol** **29.1 MW Waste Heat Recovery System** C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code)** **Secondary - (STC Code)**	Primary
iii. Production capacity	29.1 MW power generation
iv. Year of establishment-	Year - 2020
v. Date of last environmental statement submitted	Plant has commissioned in year 2020

PART-B
WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m3/day

Plant has commissioned in year 2020.

Name of products	Process water consumption per unit of products (For cooling & domestic)	
	During the previous financial year (2018-19) (KL/MWh)	**During the current financial year (2019-20) (KL/MWh)**
1. Power (Electricity)	Plant has commissioned in year 2020.	

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2018-19)	During the current financial year (2019-20)
Waste hot gases from Kiln & Cooler	**Power (Electricity)**	Waste heat recovered from Kiln-1, Kiln-2 ,Kiln-3 ,Cooler -1 , Cooler -2 & Cooler-3 (Waste hot gases depends up on availability)	

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	Effluent waste water generated from blow down of cooling tower and DM plant waste water treated in neutralization pit as prescribed by Rajasthan State Pollution Control Board and treated water is being utilized in cement plant in cooling purpose, hence maintaining Zero Liquid Discharge unit.		
(b) Air	**Waste heat recovery power plant has no any stack , hence it is not applicable**		

Ambient Air Quality (yearly average) in µg/m³

Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

*Plant has situated in existing plant premises

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	During current financial year (2019-20) (KL)
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony . Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E
SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	During current financial year (2019-20) (MT/Year)
(a)	**From process**	Not applicable	Not applicable
(b)	**From pollution control facility**	Not applicable	Not applicable
(c)	**Quantity reutilized with in the unit**	Not applicable	Not applicable

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

1) Hazardous waste generated in the form of used / spent oil, waste / residue containing oil, which is stored in barrels at safe & dedicated area and sold to recycler approved by Central Pollution Control Board.
2) Waste hot gas release from Kiln & Cooler section totally use for power generation by WHRS.
3) Effluent waste water generated from blow down of cooling tower and DM plant waste water treated in neutralization pit as prescribed by Rajasthan State Pollution Control Board and treated water is being utilized in cement plant in cooling purpose, hence maintaining Zero Liquid Discharge unit.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Industry have installed neutralization pit for proper treatment of trade effluent & treated water quality meet the norms prescribed by Rajasthan State Pollution Control Board. Treated water is being utilized in process and machinery cooling purposes.

PART-H

ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

1) Air Cooled condenser installed.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Effluent water quality monitoring is being done regularly as mentioned in consent to operate.
2) 4 nos. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed at periphery of the plant.
3) Effluent generated from the cooling tower blow down and DM plant waste water is being treated through neutralization and used in cement plant for cooling purpose, hence maintaining Zero Liquid Discharge Unit (ZLD).
4) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
5) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
6) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
7) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
8) Telemetry system installed for online ground water level monitoring.
9) Total 4800 sapling planted in the FY 2019-20.
10) More than 33 % area covered with green belt.

****

JK Cement LTD.

Phone : +91-1477-220098, 220087
Fax : +91-1477-220027, 220049
E-mail : jkc.nbh@jkcement.com
Web : www.jkcement.com

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

MGR/PC/ESR/21 270

Date: 15.09.2020

To,
The Member Secretary,
Rajasthan State Pollution Control Board,
4, Industrial Area, Jhalana Dungri
JAIPUR – 302004 (Raj)

Subject: Environmental Statement Report for the year FY 2019-2020 of Township along with Sewage Treatment plant at Sushila Nagar of M/s J. K. Cement Works, Mangrol, Tehsil: Nimbahera, Dist: Chittorgarh (Rajasthan).

Ref. : F (CPM) / Chittorgarh (Nimbahera)/ 11(1)/ 2018 – 2019 /2727-2729 Order No. 2019 – 2020 / CPM / 5562 dated 07.11.2019.

Dear Sir,

With reference to above subject matter, please find enclosed herewith Environment Statement Report of Township along with Sewage Treatment plant at Sushila Nagar of M/s J. K. Cement Works, Mangrol for the year FY 2019-2020 for your kind reference and record. We trust you will find the same in order.

Thanking You.

Yours Faithfully
For J.K. Cement Works, Mangrol

O/C

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:
The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT

FORM - V

Environmental Statement for the financial year 2019-20, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**J.K. Cement Works, Mangrol** Township along with sewage treatment plant situated Sushila Nagar, Mangrol C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code)** **Secondary - (STC Code)**	Primary
iii. Production capacity/Area	Total Area : 22.47 hector. Buildup area : 19967.80 Sq.Mtr. Sewage Treatment Plant : 200 KLD
iv. Year of establishment- (UNIT WISE)	Year 2015
v. Date of last environmental statement submitted	Consent has granted on 7.11.2019

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m^3/day

Process	: -	NIL
Cooling	: -	NIL
Domestic	: -	240 m^3/day

Name of products	Water consumption (For Domestic & Drinking)	
	During the previous financial year (2018-19) (KL/ANNUM)	During the current financial year (2019-20) (KL/ANNUM)
For Domestic & Drinking	NA	30099

ii. RAW MATERIAL CONSUMPTION

Not applicable

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	Domestic waste water generated from the colony and canteen is being treated in STP and treated water used in plantation & horticulture purpose within the premises.		
(b) Air	Not applicable		

Ambient Air Quality (yearly average) in µg/m³ *

Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO (in mg/m³)
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

* common for plant & colony

STP treated water quality data

STP treated water Quality		
Parameters	**Standards**	**Average results of YTD**
pH	Between 6.5 to 9.0	7.08
Total Suspended solids	Not to exceed 50 mg/l	4.95
Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.7
Chemical Oxygen Demand	Not to exceed 250 mg/l	12.48
Oil & Grease	Not to exceed 10 mg/l	< 2.46
Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.05

Noise level monitoring data

Month	**Noise Monitoring Report FY 2019-20**							
	Near Time office		**Near Thermal Power Plant**		**Near Raw material Gate**		**Near Packing Plant Gate**	
	Day	**Night**	**Day**	**Night**	**Day**	**Night**	**Day**	**Night**
Apr-19	71.8	61.4	67.8	57.2	71.8	61.4	67.8	57.2
May-19	69.9	60.8	69.2	59.1	69.9	60.8	69.2	59.1
Jun-19	71.6	61.2	70.0	60.4	71.6	61.2	70.0	60.4
Jul-19	70.5	60.5	68.9	58.1	70.5	60.5	68.9	58.1
Aug-19	69.7	59.9	69.9	59.6	69.7	59.9	69.9	59.6
Sep-19	71.0	61.1	68.5	58.2	71.0	61.1	68.5	58.2
Oct-19	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
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
YTD	**69.2**	**59.3**	**68.7**	**58.6**	**69.9**	**59.2**	**69.8**	**59.1**

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	**During current financial year (2019-20) (KL)**
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony. Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E

SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	**During current financial year (2019-20) (MT/Year)**
(a)	**From process**	**Nil**	**Nil**
(b)	**From pollution control facility (STP Sludge)**	NA	2.1
(c)	**Quantity reutilized with in the unit**	100%	100%

* Only sludge is being generated from Sewage Treatment Plant, which is utilization in plantation as a manure.

PART-F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

Not Applicable

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Water is mainly used by residents of colony and in plant for drinking & domestic purposes. Waste water generated as domestic Sewage and same treated in STP installed at Sushila Nagar. The Sewage Treatment Plant Installed Capacity is 200 M^3 per day. Treated water is being utilizing for horticulture purpose within the premises.

PART-H

ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

1) Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed in colony.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Monitoring of water quality is being done regularly as mentioned in consent to operate.
2) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation/horticulture development, hence maintaining Zero Liquid Discharge unit.
3) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
4) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
5) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
6) Telemetry system installed for online ground water level monitoring.
7) Total 4800 sapling planted in the FY 2019-20.
8) More than 33 % area covered with green belt.

****