JK Cement LTD.
CIN : L17229UP1994PLC017199
ISO 9001:2008, ISO 14001:2004 & OHSAS 18001 : 2007 CERTIFIED COMPANY

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

Our Ref. No.: MGR-PC-21/C13 3722 Regd.AD. Date: 26.11.2019

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

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

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

Dear Sir,
With reference to above stated Environment Clearance (EC) accorded for our Mangrol plant, Clinker (2.90 MMTPA to 5.65 MMTPA) and Cement (3.54 MMTPA to 7.05 MMTPA) Captive Power Plant from 25 MW to 60 MW, and WHRB from 10 MW to 36 MW at our J.K. Cement Works, Mangrol. Please find attached herewith six monthly compliance for the **period from April' 2019 to Sept' 2019**. 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

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

Encl: a/a
Copy to:

1.The Additional Principal Chief Conservator of Forest (C) Ministry of Environment, Forests & Climate Change, Regional office(CZ), Kendriya Bhawan,5th Floor,Sector'H',ALIGANJ,LUCKNOW-226020 (U.P.)
2.The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, New Delhi 110032
3. The Chairman, Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, JAIPUR - 302004 (RAJASTHAN)

JK Cement LTD.

HALF YEARLY COMPLIANCE REPORT

OF

ENVIRONMENTAL CLEARANCE LETTER NO.

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

Period: Apr-19 to Sept-19

For

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

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

Submitted by:
M/s J.K.CEMENT WORKS, MANGROL,
Villages; Mangrol, Tehsil: Nimbahera, District: Chittorgarh (Raj)

JK SUPER CEMENT
BUILD SAFE

Validity of the statutory approvals obtained in compliance of EC:

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

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

(Period April 2019 to September 2019) Dated 26.11.2019

S. No.	Condition	Status
	(A) Specific Conditions	
(i)	The project proponent should install 24x7 air monitoring devices to monitor air emission, as provided by the CPCB and submit report to Ministry and its Regional Office.	Complying with, We have installed the continuous ambient air monitoring station (CAAQMS) at 4 location and real time data uploading at CPCB/RPCB web portal.
(ii)	The Standard issued by the Ministry vide G.S.R. No. 612 (E) dated 25th 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.	Complying with. We are 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. Stack emission monitoring report for the period Apr-19 to Sept-19 enclosed as **Annexure-1.**
(iii)	Continuous stack monitoring facilities to monitor gaseous emissions from process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filter to coal mill and cement mill. Low Nox burner shall be provide to control Nox emissions. Regular calibration of the instruments must be ensured.	Continuous gaseous emission monitoring system (CEMS) has already installed at all major stack. Adequate Air Pollution Control equipment's has been provided for particulate matter viz. 1.ESP - Clinker cooler 2.Bag house – Raw mill / Kiln 3.Bag house – Coal mill 4.Bag house – Cement mill
(iv)	Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonnes for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.	VVFD has been installed in major motor to reduce the power consumption. We are regularly doing efforts to achieve thermal energy.
(v)	The National Air Quality Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 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.	AAQ results are well within the prescribed norms.
(vii)	Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.	To control the secondary fugitive emissions, bag filter installed at belt transfer point and encloser at hopper, water spray system, covered shed and storage silo for finished product.
(viii)	A statement on carbon budgeting including the quantum of equivalent CO_2 being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed 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. In future we will increase PPC production by which less clinker will be require. 2. More Power generation through WHR. 3. Thermal Energy is continuously decreasing from last three years.
(ix)	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc.	No any workmen/ employee are being allowed to work more than 4 hr. where temperature is more than 50°C. However during shutdown, works start only after cooling of equipment. Personal protective equipment (PPEs) are being provided to respective worker.
(x)	Arsenic and Mercury shall be monitored in emissions, ambient air and water.	Arsenic and mercury monitoring in emissions, ambient air & water is being carried out by MOEFCC recognised lab. Monitoring report of same enclosed as **Annexure-1.**
(xi)	The coal yard shall be lined and covered.	Coal stored in covered shed.
(xii)	The project proponent shall prepare a report on impact of project on surrounding reserve forest within six months and will get it approved from the State Forest Department. A copy of the conservation with the State Forest and Wildlife Department. A copy of the same should be submitted to the Ministry and its	Not applicable, Project doesn't fall any National park, Wildlife Sanctuary and forest area within 10 kms.

	Regional Office.	
(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, Unit is regularly taking care of flora & fauna in surrounding area. We have also submitted wild life conservation plan at DFO office for approval vide our letter no. MGR/PC/21/406, Dated 23.04.2019.
(xiv)	The project proponent will also provide the latest status of the environment compliances in respect of its existing plant.	Complying with, Periodical EC compliance is being submitted and last EC compliance report submitted vide our letter no. MGR/PC/21/C13/810 dated 28.05.2019 & soft copy send by email on dated 30/05/2019 for the period from Oct 18 to March 19.
(xv)	Efforts shall be made to reduce impact of the transport of the raw material and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.	Complying with, Raw material like coal/ petcoke is being transported through rail and maximum quantity of finished product dispatch through rail. Fly ash is being sourced from nearby to reduce the transportation impact. Separate truck parking area facilitated near the factory gate and regular water spray on road & yard being done.
(xvi)	Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated waste water shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process waste water shall be discharged outside the factory premises and 'zero' discharge shall be adopted.	We have already installed air cooled condensers in our captive power plant & installation work is in progress in WHRS. 100% waste water is being used in cement plant for dust suppression after treatment and maintaining ZERO liquid discharge unit.
(xvii)	Efforts shall be made to make use of rain water harvested. If needed capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	Rain water harvested in captive limestone mine pit, Remaining water requirement meet from ground water.
(xviii)	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated waste water shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act,	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

	1986.	**Annexure-1.**
(xix)	All the bag filter, raw mill dust, coal dust, clinker dust and cement dust from Pollution Control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers/ re-processors only.	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. Hazardous waste i.e. Used Oil (5.1), Waste oil (5.2) are being sold to authorized recyclers & batteries return back to supplier.
(xx)	The kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass, etc.	We have arrangement for flexible fuel feeding system like use of coal, petcoke, hazardous wastes and other wastes including biomass etc.
(xxi)	The proponent shall examine and prepare a plan for utilization of high calorific waste such as chemical waste, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such waste and enter into an MOU for long-term utilization of such waste as per the Environment (protection) Rules, 1986 and with necessary approvals.	We are having a various hazardous waste / other waste permissions from CPCB / RSPCB to use as Alternative fuel & raw materials (AFR) in our cement plant.
(xxii)	Efforts shall be made to use the high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating hazardous waste and in accordance with Hazardous Waste Regulation and prior approval of the **MPPCB.**	We are using various type of hazardous waste / other waste in kiln, and ARM in cement manufacturing with due permission obtained from CPCB / RSPCB.
(xxiii)	Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.	We have achieved planation in 33 % area with planting of local species.
(xxiv)	The project proponent shall provide for solar light system for all common areas, street light, village and parking around project area and maintain the same regularly.	We have proposed 3 MW Solar power plant at own land at Bamania, Chittorgarh.
(xxv)	The project proponent shall provide for LED light in their offices and residential areas.	Complied, We have replaced existing light in the offices and residential areas by LED light.

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

(xxxi)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	All necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. has provided during the construction period.
	(B) GENERAL CONDITIONS	
(i)	The Project authorities must strictly adhere to the stipulation made by the Rajasthan Pollution Control Board and the State Government.	We have obtained Consent to Establish File No.: F (CPM)/Chittorgarh (Nimbahera)/11(1)/2018-2019/2214-2216, Order No: 2018-2019/ CPM / 5253, Dated 10/07/2018 & obtained Consent to Operate File No.: F (CPM)/Chittorgarh (Nimbahera)/11(1)/2018-2019/2188-2190, Order No: 2019-2020/ CPM / 5515, Dated 27/09/2019 from Rajasthan State Pollution Control Board for proposed expansion.
(ii)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEFCC).	We will take prior approval of the Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion or modification in the plant, if any.
(iii)	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of 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.	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 & ambient air quality enclosed as above **Annexure-1.**
(iv)	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	There is no waste water discharge from cement plant hence 'Zero discharge' facility adopted and waste water from CPP & WHR after treatment are reuse for dust suppression and machineries cooling in the cement plant.
(v)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75dBA (daytime) and 70 dBA(night time).	Silencer, acoustic hoods, 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-19 to Sept-19 are enclosed as **Annexure-1**.

(vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers is being done periodically.
(vii)	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground watertable.	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.	Environment protection measures and safeguards recommended in the EIA/EMP report is adopted. We have undertaken socio – economic development under CSR activities like community development programmes, education programmes, drinking water supply and health care etc.
(ix)	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Lucknow. The funds so provide shall not be diverted for any other purpose.	Complying with.
(x)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestion/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied, A copy of Environmental clearance letter has been sent to the SDM, Nimbhaera tehsil, The Sarpanch, Gram panchayat, Mangrol, DIC, Chittorgarh, Chief Executive officer Zila parishad, Chittorgarh The District Magistrate, Chittorgarh on dated 19.09.2016 The clearance letter has uploaded on the website of the company i.e. www.jkcement.com
(xi)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEFCC at Lucknow. The respective zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Periodical EC compliance with monitored data are being uploaded at company website and same sent to MOEF, Lucknow, Delhi, CPCB, RPCB in soft copy. The criteria pollutant level namely; PM 10, SO2, NOx (ambient levels as well as stack emissions) for is being displayed at main gate of the company for the public domain.

(xii)	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Lucknow/ CPCB/SPCB shall monitor the stipulated conditions.	Complied and last report submitted in soft copy on dated 30/05/2019.
(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 2018-19 has submitted vide letter no. MGR/PC/21/2821-2822 & 2826, Date: 25.09.2019 to the State Pollution Control Board and regional office of the MoEF& CC at Lucknow and uploaded at company website.
(xiv)	The Project Proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment, Forest and Climate Change (MoEFCC) at http:/envfor.nic.in. This shall be advertised within 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

S. No.	Condition	Status
	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)
AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON
FOR UNIT-1 & UNIT-2
(ALL VALUES IN MICROGRAMS / CUBIC METER)
(April' 2019 - September' 2019)

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT GATE	NEAR RAW MATERIAL GATE	NEAR PACKING PLANT GATE	Remarks
April'2019						
1	PM-10	56.9	68.8	68.1	48.5	
2	PM -2.5	37.4	42.9	39.2	36.3	
3	SO2	13.6	14.4	14.5	10.8	
4	NOX	23.7	22.5	24.4	23.7	
5	CO	543.2	652.7	823.0	678.4	
May'2019						
1	PM-10	58.5	67.2	66.3	47.8	
2	PM -2.5	39.2	41.7	39.2	36.8	
3	SO2	13.7	14.7	15.0	11.3	
4	NOX	24.2	22.7	26.2	26.0	
5	CO	565.3	695.6	855.9	692.7	
June'2019						
1	PM-10	60.5	68.5	68.2	48.0	
2	PM -2.5	42.7	44.0	41.4	36.8	
3	SO2	13.6	14.4	14.5	11.7	
4	NOX	24.5	23.0	26.3	25.5	
5	CO	599.7	691.3	863.0	682.7	
July'2019						
1	PM-10	58.6	62.3	55.2	58.2	
2	PM -2.5	39.2	41.8	35.8	32.7	
3	SO2	14.0	14.0	13.2	13.0	
4	NOX	24.5	23.8	28.8	24.8	
5	CO	678.4	704.2	741.4	770.0	
August'2019						
1	PM-10	47.2	49.8	54.1	55.3	
2	PM -2.5	32.0	33.4	34.4	36.0	
3	SO2	13.8	15.7	14.1	13.1	
4	NOX	24.6	23.1	29.2	24.8	
5	CO	691.3	699.9	752.8	797.2	
September'2019						
1	PM-10	40.3	43.5	45.3	50.2	
2	PM -2.5	29.0	30.0	31.7	32.2	
3	SO2	14.7	18.9	12.9	13.4	
4	NOX	25.5	23.9	25.2	24.5	
5	CO	694	694.2	760.0	760.0	
Six monthly Average						
1	**PM 2.5**	**53.7**	**60.0**	**59.5**	**51.3**	
2	**PM10**	**36.6**	**39.0**	**37.0**	**35.1**	
3	**SO2**	**13.9**	**15.4**	**14.0**	**12.2**	
4	**NOX**	**24.5**	**23.2**	**26.7**	**24.9**	
5	**CO**	**628.7**	**689.6**	**799.4**	**730.2**	

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

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
	April'2019								
03.04.19	KILN + RAW MILL (BH)	5.23	411	17.62	62.60	12.7	13.8	0.069	
10.04.19	KILN + RAW MILL (BH)	5.23	414	18.14	63.98	13.6		0.075	
17.04.19	KILN + RAW MILL (BH)	5.23	417	17.82	62.40	13.6		0.073	
24.04.19	KILN + RAW MILL (BH)	5.23	424	18.32	63.09	15.1		0.082	
	May'2019								
02.05.19	KILN + RAW MILL (BH)	5.23	412	47.07	59.68	14.6	14.7	0.075	
09.05.19	KILN + RAW MILL (BH)	5.23	415	47.75	62.10	15.6		0.084	
16.05.19	KILN + RAW MILL (BH)	5.23	422	49.32	60.62	13.8		0.072	
23.05.19	KILN + RAW MILL (BH)	5.23	423	49.55	63.24	14.9		0.081	
	June'2019								
05.06.19	KILN + RAW MILL (BH)	5.23	412	47.07	56.83	14.3	14.5	0.070	
12.06.19	KILN + RAW MILL (BH)	5.23	415	47.75	61.19	14.5		0.077	
19.06.19	KILN + RAW MILL (BH)	5.23	422	49.32	62.04	14.0		0.075	
26.06.19	KILN + RAW MILL (BH)	5.23	423	49.55	62.29	15.2		0.082	
	July' 2019								
03.07.19	KILN + RAW MILL (BH)	5.23	408	15.74	58.09	13.1	14.1	0.066	
10.07.19	KILN + RAW MILL (BH)	5.23	410	17.16	60.90	13.8		0.073	
17.07.19	KILN + RAW MILL (BH)	5.23	415	17.44	61.79	14.2		0.076	
24.07.19	KILN + RAW MILL (BH)	5.23	418	17.73	62.36	15.4		0.083	
	August' 2019								
06.08.19	KILN + RAW MILL (BH)	5.23	409	15.86	57.94	14.3	13.7	0.072	
13.08.19	KILN + RAW MILL (BH)	5.23	411	16.57	60.75	13.5		0.071	
20.08.19	KILN + RAW MILL (BH)	5.23	413	17.08	60.78	12.7		0.067	
27.08.19	KILN + RAW MILL (BH)	5.23	415	17.40	61.61	14.2		0.076	
	September' 2019								
03.09.19	KILN + RAW MILL (BH)	5.23	412	15.82	57.52	15.3	14.8	0.076	
10.09.19	KILN + RAW MILL (BH)	5.23	414	16.77	60.31	15.0		0.078	
17.09.19	KILN + RAW MILL (BH)	5.23	411	16.29	58.23	14.2		0.071	
24.09.19	KILN + RAW MILL (BH)	5.23	416	17.46	61.71	14.5		0.077	
	April'2019								
03.04.19	CLINKER COOLER (ESP)	7.07	421	11.34	78.08	22.5	23.2	0.152	
13.04.19	CLINKER COOLER (ESP)	7.07	427	12.26	84.41	23.9		0.174	
20.04.19	CLINKER COOLER (ESP)	7.07	429	12.56	86.76	23.1		0.173	
27.04.19	CLINKER COOLER (ESP)	7.07	431	11.69	79.71	23.1		0.159	
	May'2019								
02.05.19	CLINKER COOLER (ESP)	7.07	424	49.77	133.38	24.4	23.7	0.281	
09.05.19	CLINKER COOLER (ESP)	7.07	425	49.99	144.19	24.6		0.306	
16.05.19	CLINKER COOLER (ESP)	7.07	430	51.11	152.30	23.0		0.303	
23.05.19	CLINKER COOLER (ESP)	7.07	427	50.44	146.56	22.9		0.290	
	June'2019								
05.06.19	CLINKER COOLER (ESP)	7.07	424	49.77	136.02	22.8	23.1	0.268	
12.06.19	CLINKER COOLER (ESP)	7.07	425	49.99	140.85	24.5		0.298	
19.06.19	CLINKER COOLER (ESP)	7.07	430	51.11	147.12	22.9		0.291	
26.06.19	CLINKER COOLER (ESP)	7.07	427	50.44	150.45	22.2		0.289	

	July' 2019								
03.07.19	CLINKER COOLER (ESP)	7.07	430	10.87	134.69	23.2	**24.2**	0.270	
10.07.19	CLINKER COOLER (ESP)	7.07	425	11.46	141.62	24.3		0.297	
17.07.19	CLINKER COOLER (ESP)	7.07	428	11.36	140.85	24.0		0.292	
24.07.19	CLINKER COOLER (ESP)	7.07	423	11.79	146.50	25.4		0.322	
	August' 2019								
06.08.19	CLINKER COOLER (ESP)	7.07	425	10.58	131.56	24.1	**24.3**	0.274	
13.08.19	CLINKER COOLER (ESP)	7.07	426	11.26	139.62	25.5		0.308	
20.08.19	CLINKER COOLER (ESP)	7.07	428	11.51	142.11	22.6		0.277	
27.08.19	CLINKER COOLER (ESP)	7.07	424	11.73	145.41	25.1		0.315	
	September' 2019								
03.09.19	CLINKER COOLER (ESP)	7.07	427	10.76	132.90	22.0	**22.3**	0.253	
10.09.19	CLINKER COOLER (ESP)	7.07	424	10.18	125.37	26.8		0.290	
17.09.19	CLINKER COOLER (ESP)	7.07	426	11.55	143.19	19.0		0.235	
24.09.19	CLINKER COOLER (ESP)	7.07	425	11.88	147.74	21.4		0.273	
	April'2019								
03.04.19	COAL MILL (B.F.)	0.45	348	14.26	6.27	15.3	**13.7**	0.008	
13.04.19	COAL MILL (B.F.)	0.45	355	14.20	6.22	13.2		0.007	
20.04.19	COAL MILL (B.F.)	0.45	350	14.71	6.45	11.3		0.006	
27.04.19	COAL MILL (B.F.)	0.45	358	14.83	6.46	15.1		0.008	
	May'2019								
03.05.19	COAL MILL (B.F.)	0.45	344	30.54	4.52	15.1	**13.9**	0.006	
10.05.19	COAL MILL (B.F.)	0.45	341	29.75	4.40	13.3		0.005	
17.05.19	COAL MILL (B.F.)	0.45	352	32.58	4.79	10.6		0.004	
24.05.19	COAL MILL (B.F.)	0.45	357	33.84	4.70	16.4		0.007	
	June'2019								
05.06.19	COAL MILL (B.F.)	0.45	344	30.54	4.69	13.8	**12.9**	0.006	
12.06.19	COAL MILL (B.F.)	0.45	341	29.75	4.66	13.0		0.005	
19.06.19	COAL MILL (B.F.)	0.45	352	32.58	4.53	9.6		0.004	
26.06.19	COAL MILL (B.F.)	0.45	357	33.84	4.81	15.3		0.006	
	July' 2019								
03.07.19	COAL MILL (B.F.)	0.45	351	14.13	4.56	15.7	**13.3**	0.006	
10.07.19	COAL MILL (B.F.)	0.45	345	14.38	4.61	13.3		0.005	
17.07.19	COAL MILL (B.F.)	0.45	343	14.52	4.64	8.5		0.003	
24.07.19	COAL MILL (B.F.)	0.45	348	14.53	4.62	15.5		0.006	
	August' 2019								
06.08.19	COAL MILL (B.F.)	0.45	425	10.58	131.56	24.1	**24.3**	0.274	
13.08.19	COAL MILL (B.F.)	0.45	426	11.26	139.62	25.5		0.308	
20.08.19	COAL MILL (B.F.)	0.45	428	11.51	142.11	22.6		0.277	
27.08.19	COAL MILL (B.F.)	0.45	424	11.73	145.41	25.1		0.315	
	September' 2019								
03.09.19	COAL MILL (B.F.)	0.45	349	14.37	4.66	15.9	**13.6**	0.006	
10.09.19	COAL MILL (B.F.)	0.45	352	13.67	4.41	13.8		0.005	
17.09.19	COAL MILL (B.F.)	0.45	347	14.61	4.70	9.9		0.004	
24.09.19	COAL MILL (B.F.)	0.45	348	14.49	4.69	14.7		0.006	
	April'2019								
02.04.19	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
09.04.19	CEMENT MILL No.-1 (B.F.)								
16.04.19	CEMENT MILL No.-1 (B.F.)								
23.04.19	CEMENT MILL No.-1 (B.F.)								

	May'2019								
03.05.19	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
10.05.19	CEMENT MILL No.-1 (B.F.)								
17.05.19	CEMENT MILL No.-1 (B.F.)								
24.05.19	CEMENT MILL No.-1 (B.F.)								
	June'2019								
03.06.19	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
10.06.19	CEMENT MILL No.-1 (B.F.)								
17.06.19	CEMENT MILL No.-1 (B.F.)								
24.06.19	CEMENT MILL No.-1 (B.F.)								
	July' 2019								
04.07.19	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
11.07.19	CEMENT MILL No.-1 (B.F.)								
18.07.19	CEMENT MILL No.-1 (B.F.)								
25.07.19	CEMENT MILL No.-1 (B.F.)								
	August' 2019								
07.08.19	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
14.08.19	CEMENT MILL No.-1 (B.F.)								
21.08.19	CEMENT MILL No.-1 (B.F.)								
28.08.19	CEMENT MILL No.-1 (B.F.)								
	September' 2019								
05.09.19	CEMENT MILL No.-1 (B.F.)	Mill Not in operation							
12.09.19	CEMENT MILL No.-1 (B.F.)								
19.09.19	CEMENT MILL No.-1 (B.F.)								
26.09.19	CEMENT MILL No.-1 (B.F.)								
	April'2019								
02.04.19	CEMENT MILL No.-2 (B. H.)	0.50	366	18.28	8.90	16.7	16.4	0.013	
09.04.19	CEMENT MILL No.-2 (B. H.)	0.50	371	20.13	9.74	16.0		0.013	
16.04.19	CEMENT MILL No.-2 (B. H.)	0.50	381	19.71	9.47	16.8		0.014	
23.04.19	CEMENT MILL No.-2 (B. H.)	0.50	374	20.52	9.77	15.9		0.013	
	May'2019								
03.05.19	CEMENT MILL No.-2 (B. H.)	0.50	364	35.56	5.53	18.2	17.1	0.009	
10.05.19	CEMENT MILL No.-2 (B. H.)	0.50	361	34.83	5.97	16.8		0.009	
17.05.19	CEMENT MILL No.-2 (B. H.)	0.50	376	38.45	6.13	17.8		0.009	
24.05.19	CEMENT MILL No.-2 (B. H.)	0.50	370	37.02	6.20	15.4		0.008	
	June'2019								
03.06.19	CEMENT MILL No.-2 (B. H.)	0.50	364	35.56	5.51	18	16.4	0.008	
10.06.19	CEMENT MILL No.-2 (B. H.)	0.50	361	34.83	5.98	16.4		0.008	
17.06.19	CEMENT MILL No.-2 (B. H.)	0.50	376	38.45	6.07	16.9		0.009	
24.06.19	CEMENT MILL No.-2 (B. H.)	0.50	370	37.02	6.15	14.7		0.008	
	July' 2019								
04.07.19	CEMENT MILL No.-2 (B. H.)	0.50	364	17.68	5.55	17.4	16.3	0.008	
11.07.19	CEMENT MILL No.-2 (B. H.)	0.50	366	18.28	5.75	16.3		0.008	
18.07.19	CEMENT MILL No.-2 (B. H.)	0.50	374	19.49	6.07	16.9		0.009	
25.07.19	CEMENT MILL No.-2 (B. H.)	0.50	369	19.79	6.15	14.7		0.008	
	August' 2019								
07.08.19	CEMENT MILL No.-2 (B. H.)	0.50	365	17.39	5.44	21.5	16.9	0.010	
14.08.19	CEMENT MILL No.-2 (B. H.)	0.50	368	17.78	5.58	15.1		0.007	
21.08.19	CEMENT MILL No.-2 (B. H.)	0.50	373	18.72	5.89	15.9		0.008	
28.08.19	CEMENT MILL No.-2 (B. H.)	0.50	370	18.37	5.74	15.0		0.007	

	September' 2019								
05.09.19	CEMENT MILL No.-2 (B. H.)	0.50	364	17.64	5.52	19	**15.8**	0.009	
12.09.19	CEMENT MILL No.-2 (B. H.)	0.50	368	17.54	5.50	13.3		0.006	
19.09.19	CEMENT MILL No.-2 (B. H.)	0.50	365	17.94	5.65	15.9		0.008	
26.09.19	CEMENT MILL No.-2 (B. H.)	0.50	366	17.85	5.56	14.6		0.007	
	April'2019								
03.04.19	Crusher (B.F.)	0.38	322	9.79	2.36	16.6	**16.8**	0.003	
10.04.19	Crusher (B.F.)	0.38	324	10.07	2.41	16.1		0.003	
17.04.19	Crusher (B.F.)	0.38	321	10.85	2.62	18.3		0.004	
24.04.19	Crusher (B.F.)	0.38	324	11.07	2.65	16.3		0.004	
	May'2019								
02.05.19	Crusher (B.F.)	0.38	326	25.68	2.27	16.3	**16.7**	0.003	
09.05.19	Crusher (B.F.)	0.38	324	25.12	2.37	17.0		0.003	
16.05.19	Crusher (B.F.)	0.38	325	25.40	2.57	18.1		0.004	
23.05.19	Crusher (B.F.)	0.38	324	25.12	2.58	15.4		0.003	
	June'2019								
05.06.19	Crusher (B.F.)	0.38	324	25.12	2.31	15.1	**16.9**	0.003	
12.06.19	Crusher (B.F.)	0.38	326	25.68	2.42	18.7		0.004	
19.06.19	Crusher (B.F.)	0.38	324	25.12	2.58	19.4		0.004	
26.06.19	Crusher (B.F.)	0.38	325	25.40	2.49	14.2		0.003	
	July' 2019								
03.07.19	Crusher (B.F.)	0.38	323	9.55	2.29	15.6	**16.7**	0.003	
10.07.19	Crusher (B.F.)	0.38	327	9.93	2.35	18.5		0.004	
17.07.19	Crusher (B.F.)	0.38	326	10.53	2.50	19.9		0.004	
24.07.19	Crusher (B.F.)	0.38	325	10.63	2.53	12.8		0.003	
	August' 2019								
06.08.19	Crusher (B.F.)	0.38	324	9.70	2.32	15.1	**17.0**	0.003	
13.08.19	Crusher (B.F.)	0.38	325	9.65	2.30	20.3		0.004	
20.08.19	Crusher (B.F.)	0.38	323	10.12	2.43	19.7		0.004	
27.08.19	Crusher (B.F.)	0.38	326	10.70	2.54	12.7		0.003	
	September' 2019								
03.09.19	Crusher (B.F.)	0.38	325	9.52	2.27	16.3	**18.4**	0.003	
10.09.19	Crusher (B.F.)	0.38	326	10.04	2.39	21.3		0.004	
17.09.19	Crusher (B.F.)	0.38	327	10.30	2.44	22.3		0.005	
24.09.19	Crusher (B.F.)	0.38	324	10.61	2.54	13.7		0.003	

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

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
	April'19								
03.04.19	KILN + RAW MILL (B.F.)	14.18	410	14.63	150.78	15.8	14.9	0.206	
10.04.19	KILN + RAW MILL (B.F.)	14.18	415	15.47	157.52	14.5		0.197	
17.04.19	KILN + RAW MILL (B.F.)	14.18	422	14.34	143.59	15.3		0.190	
24.04.19	KILN + RAW MILL (B.F.)	14.18	425	13.57	134.92	13.8		0.161	
	May'19								
02.05.19	KILN + RAW MILL (B.F.)	14.18	412	47.07	42.22	14.6	13.6	0.053	
09.05.19	KILN + RAW MILL (B.F.)	14.18	414	47.52	42.53	13.6		0.050	
16.05.19	KILN + RAW MILL (B.F.)	14.18	419	48.65	40.27	13.0		0.045	
23.05.19	KILN + RAW MILL (B.F.)	14.18	426	50.22	38.30	13.2		0.044	
	June'19								
06.06.19	KILN + RAW MILL (B.F.)	14.18	412	47.07	50.30	11.5	12.4	0.050	
13.06.19	KILN + RAW MILL (B.F.)	14.18	414	47.52	41.59	12.6		0.045	
20.06.19	KILN + RAW MILL (B.F.)	14.18	419	48.65	40.68	12.5		0.044	
27.06.19	KILN + RAW MILL (B.F.)	14.18	426	50.22	39.74	12.8		0.044	
	July'19								
04.07.19	KILN + RAW MILL (B.F.)	14.18	410	15.27	42.45	13.6	12.4	0.050	
11.07.19	KILN + RAW MILL (B.F.)	14.18	414	15.95	43.93	11.0		0.042	
18.07.19	KILN + RAW MILL (B.F.)	14.18	419	15.07	41.00	12.0		0.043	
25.07.19	KILN + RAW MILL (B.F.)	14.18	425	15.02	40.29	13.1		0.046	
	August'19								
07.08.19	KILN + RAW MILL (B.F.)	14.18	408	15.41	43.05	13.5	12.2	0.050	
14.08.19	KILN + RAW MILL (B.F.)	14.18	413	15.33	42.31	10.6		0.039	
21.08.19	KILN + RAW MILL (B.F.)	14.18	412	15.26	42.22	11.7		0.043	
28.08.19	KILN + RAW MILL (B.F.)	14.18	421	14.84	40.19	12.9		0.045	
	September'19								
05.09.19	KILN + RAW MILL (B.F.)	14.18	410	14.96	41.59	14.1	13.1	0.051	
12.09.19	KILN + RAW MILL (B.F.)	14.18	414	15.45	42.53	11.7		0.043	
19.09.19	KILN + RAW MILL (B.F.)	14.18	415	14.84	40.77	14.1		0.050	
26.09.19	KILN + RAW MILL (B.F.)	14.18	416	15.38	42.17	12.5		0.046	
	April'19								
03.04.19	CLINKER COOLER (ESP)	8.80	422.00	12.84	110.04	23.40	24.8	0.222	
13.04.19	CLINKER COOLER (ESP)	8.80	426	12.58	107.81	25.7		0.239	
20.04.19	CLINKER COOLER (ESP)	8.80	431	11.48	98.71	25.4		0.217	
27.04.19	CLINKER COOLER (ESP)	8.80	430	12.10	102.69	24.6		0.218	
	May'19								
03.05.19	CLINKER COOLER (ESP)	8.80	424	49.77	153.74	24.2	25.0	0.321	
10.05.19	CLINKER COOLER (ESP)	8.80	420	48.88	146.77	25.2		0.320	
17.05.19	CLINKER COOLER (ESP)	8.80	425	49.99	135.89	25.3		0.297	
24.05.19	CLINKER COOLER (ESP)	8.80	428	50.66	149.23	25.1		0.324	
	June'19								
06.06.19	CLINKER COOLER (ESP)	8.80	424	49.77	156.56	23.1	24.2	0.312	
13.06.19	CLINKER COOLER (ESP)	8.80	420	48.88	141.12	25.5		0.311	
20.06.19	CLINKER COOLER (ESP)	8.80	425	49.99	144.05	23.1		0.288	
27.06.19	CLINKER COOLER (ESP)	8.80	428	50.66	139.71	25.2		0.304	

	July'19								
04.07.19	CLINKER COOLER (ESP)	8.80	431	12.89	159.81	23.7	**24.9**	0.327	
11.07.19	CLINKER COOLER (ESP)	8.80	425	11.95	147.63	25.0		0.319	
18.07.19	CLINKER COOLER (ESP)	8.80	428	11.29	140.45	24.0		0.291	
25.07.19	CLINKER COOLER (ESP)	8.80	425	11.46	142.08	26.7		0.328	
	August'19								
07.08.19	CLINKER COOLER (ESP)	8.80	424	13.04	162.07	22.2	**23.6**	0.311	
14.08.19	CLINKER COOLER (ESP)	8.80	430	12.29	152.30	24.8		0.326	
21.08.19	CLINKER COOLER (ESP)	8.80	432	11.56	142.84	23.5		0.290	
28.08.19	CLINKER COOLER (ESP)	8.80	426	11.96	148.24	23.8		0.305	
	September'19								
05.09.19	CLINKER COOLER (ESP)	8.80	425	12.93	160.18	21.0	**20.9**	0.291	
12.09.19	CLINKER COOLER (ESP)	8.80	426	12.63	155.97	22.1		0.298	
19.09.19	CLINKER COOLER (ESP)	8.80	428	11.79	145.07	19.9		0.249	
26.09.19	CLINKER COOLER (ESP)	8.80	430	12.22	151.94	20.5		0.269	
	April'19								
03.04.19	COAL MILL (B.F.)	2.00	344	13.61	26.51	12.7	**14.3**	0.029	
13.04.19	COAL MILL (B.F.)	2.00	348	13.39	25.99	13.7		0.031	
20.04.19	COAL MILL (B.F.)	2.00	350	13.13	25.49	15.2		0.033	
27.04.19	COAL MILL (B.F.)	2.00	352	13.49	26.02	15.6		0.035	
	May'19								
03.05.19	COAL MILL (B.F.)	2.00	346	31.05	5.07	11.4	**14.7**	0.005	
10.05.19	COAL MILL (B.F.)	2.00	344	30.54	4.95	14.9		0.006	
17.05.19	COAL MILL (B.F.)	2.00	348	31.57	4.90	15.5		0.007	
24.05.19	COAL MILL (B.F.)	2.00	350	31.88	5.01	17.1		0.007	
	June'19								
06.06.19	COAL MILL (B.F.)	2.00	346	31.05	5.24	10.6	**14.2**	0.005	
13.06.19	COAL MILL (B.F.)	2.00	344	30.54	5.10	15.1		0.007	
20.06.19	COAL MILL (B.F.)	2.00	348	31.57	4.97	14.5		0.006	
27.06.19	COAL MILL (B.F.)	2.00	350	31.88	5.05	16.6		0.007	
	July'19								
04.07.19	COAL MILL (B.F.)	2.00	345	14.74	5.47	10.1	**14.5**	0.005	
11.07.19	COAL MILL (B.F.)	2.00	348	14.30	5.33	15.0		0.007	
18.07.19	COAL MILL (B.F.)	2.00	347	13.17	4.89	15.8		0.007	
25.07.19	COAL MILL (B.F.)	2.00	349	14.04	5.20	16.9		0.008	
	August'19								
07.08.19	COAL MILL (B.F.)	2.00	350	14.53	5.41	9.2	**14.1**	0.004	
14.08.19	COAL MILL (B.F.)	2.00	346	14.58	5.45	14.2		0.007	
21.08.19	COAL MILL (B.F.)	2.00	345	13.43	4.97	14.9		0.006	
28.08.19	COAL MILL (B.F.)	2.00	352	13.96	5.15	18.1		0.008	
	September'19								
05.09.19	COAL MILL (B.F.)	2.00	351	14.08	5.23	10.0	**15.6**	0.005	
12.09.19	COAL MILL (B.F.)	2.00	348	14.35	5.35	16.5		0.008	
19.09.19	COAL MILL (B.F.)	2.00	347	14.61	5.42	15.7		0.007	
26.09.19	COAL MILL (B.F.)	2.00	350	14.11	5.24	20.2		0.009	
	April'19								
01.04.19	CEMENT MILL (B.F.)	6.60	374	15.45	99.30	15.4	**15.3**	0.132	
08.04.19	CEMENT MILL (B.F.)	6.60	371	17.09	109.85	16.5		0.157	
15.04.19	CEMENT MILL (B.F.)	6.60	378	16.78	107.15	15.5		0.143	
22.04.19	CEMENT MILL (B.F.)	6.60	368	16.72	106.42	13.6		0.125	

	May'19								
03.05.19	CEMENT MILL (B.F.)	6.60	376	38.45	6.79	15.9	**17.6**	0.009	
10.05.19	CEMENT MILL (B.F.)	6.60	372	37.50	7.16	16.8		0.010	
17.05.19	CEMENT MILL (B.F.)	6.60	374	37.98	7.28	23.7		0.015	
24.05.19	CEMENT MILL (B.F.)	6.60	371	37.26	7.41	13.8		0.009	
	June'19								
06.06.19	CEMENT MILL (B.F.)	6.60	376	38.45	6.42	18.3	**18.9**	0.010	
13.06.19	CEMENT MILL (B.F.)	6.60	372	37.50	6.83	18.0		0.011	
20.06.19	CEMENT MILL (B.F.)	6.60	374	37.98	6.93	24.6		0.015	
27.06.19	CEMENT MILL (B.F.)	6.60	371	37.26	7.32	14.6		0.009	
	July'19								
04.07.19	CEMENT MILL (B.F.)	6.60	376	15.58	6.44	18.1	**18.6**	0.010	
11.07.19	CEMENT MILL (B.F.)	6.60	378	16.07	6.88	17.2		0.010	
18.07.19	CEMENT MILL (B.F.)	6.60	377	16.84	6.97	24.3		0.015	
25.07.19	CEMENT MILL (B.F.)	6.60	374	16.94	7.28	14.7		0.009	
	August'19								
07.08.19	CEMENT MILL (B.F.)	6.60	378	15.76	6.42	14.9	**17.6**	0.008	
14.08.19	CEMENT MILL (B.F.)	6.60	375	16.10	6.85	18.1		0.011	
21.08.19	CEMENT MILL (B.F.)	6.60	380	16.69	6.95	23.5		0.014	
28.08.19	CEMENT MILL (B.F.)	6.60	377	17.09	7.32	13.8		0.009	
	September'19								
05.09.19	CEMENT MILL (B.F.)	6.60	374	15.53	6.44	12.8	**14.8**	0.007	
12.09.19	CEMENT MILL (B.F.)	6.60	371	15.74	6.88	15.5		0.009	
19.09.19	CEMENT MILL (B.F.)	6.60	373	16.14	6.97	19.0		0.011	
26.09.19	CEMENT MILL (B.F.)	6.60	376	16.99	7.28	12.0		0.008	
	April'19								
03.04.19	CRUSHER BAG FILTER	1.23	322	10.46	11.91	15.8	**14.9**	0.016	
10.04.19	CRUSHER BAG FILTER	1.23	320	11.43	13.09	14.4		0.016	
17.04.19	CRUSHER BAG FILTER	1.23	320	10.94	12.53	14.8		0.016	
24.04.19	CRUSHER BAG FILTER	1.23	325	11.20	12.63	14.6		0.016	
	May'19								
02.05.19	CRUSHER BAG FILTER	1.23	323	10.42	11.82	16.10	**15.7**	0.016	
09.05.19	CRUSHER BAG FILTER	1.23	321	11.13	12.71	15.1		0.017	
16.05.19	CRUSHER BAG FILTER	1.23	322	10.69	12.17	15.4		0.016	
23.05.19	CRUSHER BAG FILTER	1.23	324	10.95	12.39	16.2		0.017	
	June'19								
06.06.19	CRUSHER BAG FILTER	1.23	321	10.73	12.25	14.4	**15.0**	0.015	
13.06.19	CRUSHER BAG FILTER	1.23	318	10.34	11.92	16.2		0.017	
20.06.19	CRUSHER BAG FILTER	1.23	326	11.21	12.60	13.9		0.015	
27.06.19	CRUSHER BAG FILTER	1.23	327	11.06	12.40	15.3		0.016	
	July'19								
04.07.19	CRUSHER BAG FILTER	1.23	323	11.05	2.65	15.0	**15.1**	0.003	
11.07.19	CRUSHER BAG FILTER	1.23	322	10.04	2.42	16.5		0.004	
18.07.19	CRUSHER BAG FILTER	1.23	324	10.95	2.62	14.1		0.004	
25.07.19	CRUSHER BAG FILTER	1.23	325	11.31	2.70	14.8		0.003	

	August'19								
07.08.19	CRUSHER BAG FILTER	1.23	324	10.84	2.59	15.30	**14.5**	0.003	
14.08.19	CRUSHER BAG FILTER	1.23	321	10.39	2.51	15.2		0.004	
21.08.19	CRUSHER BAG FILTER	1.23	326	10.76	2.56	13.7		0.004	
28.08.19	CRUSHER BAG FILTER	1.23	325	11.20	2.67	13.9		0.003	
	September'19								
05.09.19	CRUSHER BAG FILTER	1.23	325	10.45	2.49	15.0	**12.3**	0.003	
12.09.19	CRUSHER BAG FILTER	1.23	322	10.58	2.55	13.6		0.004	
19.09.19	CRUSHER BAG FILTER	1.23	324	10.95	2.62	9.8		0.005	
26.09.19	CRUSHER BAG FILTER	1.23	327	11.34	2.69	10.8		0.003	
	April'19								
02.04.19	PACKER -1 BAG FILTER	0.785	327	12.39	3.13	13.2	**12.5**	0.004	
09.04.19	PACKER -1 BAG FILTER	0.785	326	11.96	3.02	12.9		0.003	
16.04.19	PACKER -1 BAG FILTER	0.785	325	11.58	2.92	12.1		0.003	
23.04.19	PACKER -1 BAG FILTER	0.785	324	12.23	3.09	11.8		0.003	
	May'19								
02.05.19	PACKER -1 BAG FILTER	0.785	327	12.39	2.89	13.1	**14.6**	0.003	
10.05.19	PACKER -1 BAG FILTER	0.785	326	11.96	3.02	15.0		0.004	
18.05.19	PACKER -1 BAG FILTER	0.785	325	11.58	2.92	18.8		0.005	
24.05.19	PACKER -1 BAG FILTER	0.785	324	12.23	3.09	11.4		0.003	
	June'19								
06.06.19	PACKER -1 BAG FILTER	0.785	327	25.97	2.83	13.4	**12.2**	0.003	
13.06.19	PACKER -1 BAG FILTER	0.785	326	25.68	3.11	11.7		0.003	
20.06.19	PACKER -1 BAG FILTER	0.785	325	25.40	3.05	10.6		0.003	
27.06.19	PACKER -1 BAG FILTER	0.785	324	25.12	3.19	13.0		0.004	
	July'19								
04.07.19	PACKER -1 BAG FILTER	0.785	326	12.47	3.17	12.4	**12.5**	0.003	
11.07.19	PACKER -1 BAG FILTER	0.785	323	12.11	3.11	13.4		0.004	
18.07.19	PACKER -1 BAG FILTER	0.785	325	12.25	3.12	10.6		0.003	
25.07.19	PACKER -1 BAG FILTER	0.785	327	11.88	3.02	13.6		0.004	
	August'19								
07.08.19	PACKER -1 BAG FILTER	0.785	324	12.08	3.10	12.5	**12.9**	0.003	
14.08.19	PACKER -1 BAG FILTER	0.785	325	12.35	3.15	14.8		0.004	
21.08.19	PACKER -1 BAG FILTER	0.785	328	12.51	3.16	9.9		0.003	
28.08.19	PACKER -1 BAG FILTER	0.785	326	12.07	3.08	14.5		0.004	
	September'19								
05.09.19	PACKER -1 BAG FILTER	0.785	326	12.27	3.14	13.6	**14.5**	0.004	
12.09.19	PACKER -1 BAG FILTER	0.785	323	11.91	3.04	17.3		0.005	
19.09.19	PACKER -1 BAG FILTER	0.785	322	12.10	3.08	11.2		0.003	
26.09.19	PACKER -1 BAG FILTER	0.785	325	12.45	3.19	15.9		0.004	
	April'19								
02.04.19	PACKER -2 BAG FILTER	0.785	328	12.10	3.04	14.5	**13.4**	0.004	
09.04.19	PACKER -2 BAG FILTER	0.785	327	12.19	3.08	13.6		0.004	
16.04.19	PACKER -2 BAG FILTER	0.785	326	11.81	2.98	11.2		0.003	
23.04.19	PACKER -2 BAG FILTER	0.785	324	12.92	3.26	14.4		0.004	
	May'19								
04.05.19	PACKER -2 BAG FILTER	0.785	323	11.38	2.66	13.7	**14.1**	0.003	
11.05.19	PACKER -2 BAG FILTER	0.785	324	11.93	3.01	12.1		0.003	
18.05.19	PACKER -2 BAG FILTER	0.785	325	11.58	2.91	18.3		0.005	
25.05.19	PACKER -2 BAG FILTER	0.785	325	12.20	3.08	12.1		0.003	

	June'19								
06.06.19	PACKER -2 BAG FILTER	0.785	328	26.24	2.75	14.7	**13.5**	0.003	
13.06.19	PACKER -2 BAG FILTER	0.785	327	25.97	3.14	14.1		0.004	
20.06.19	PACKER -2 BAG FILTER	0.785	326	25.68	3.03	10.8		0.003	
27.06.19	PACKER -2 BAG FILTER	0.785	324	25.12	3.23	14.2		0.004	
	July'19								
04.07.19	PACKER -2 BAG FILTER	0.785	330	12.24	3.11	14.3	**13.3**	0.004	
11.07.19	PACKER -2 BAG FILTER	0.785	331	12.57	3.21	13.8		0.004	
18.07.19	PACKER -2 BAG FILTER	0.785	324	11.77	3.00	11.2		0.003	
25.07.19	PACKER -2 BAG FILTER	0.785	323	12.56	3.19	13.9		0.004	
	August'19								
07.08.19	PACKER -2 BAG FILTER	0.785	325	12.30	3.13	13.3	**13.2**	0.004	
14.08.19	PACKER -2 BAG FILTER	0.785	328	11.95	3.04	14.4		0.004	
21.08.19	PACKER -2 BAG FILTER	0.785	326	12.02	3.07	10.8		0.003	
28.08.19	PACKER -2 BAG FILTER	0.785	330	12.65	3.2	14.2		0.004	
	September'19								
05.09.19	PACKER -2 BAG FILTER	0.785	326	12.17	3.11	12.4	**11.9**	0.003	
12.09.19	PACKER -2 BAG FILTER	0.785	327	12.49	3.18	12.8		0.004	
19.09.19	PACKER -2 BAG FILTER	0.785	325	11.79	2.99	9.8		0.003	
26.09.19	PACKER -2 BAG FILTER	0.785	324	12.73	3.23	12.4		0.003	
	April'19								
02.04.19	PACKER -3 BAG FILTER	0.785	327	11.67	2.94	14.7	**13.8**	0.004	
09.04.19	PACKER -3 BAG FILTER	0.785	328	11.84	2.99	13.8		0.004	
16.04.19	PACKER -3 BAG FILTER	0.785	326	12.02	3.03	13.1		0.003	
23.04.19	PACKER -3 BAG FILTER	0.785	326	12.82	3.24	13.7		0.004	
	May'19								
04.05.19	PACKER -3 BAG FILTER	0.785	326	12.22	2.86	8.8	**10.5**	0.002	
11.05.19	PACKER -3 BAG FILTER	0.785	325	11.41	2.87	11.6		0.003	
18.05.19	PACKER -3 BAG FILTER	0.785	324	11.82	2.96	12.2		0.003	
25.05.19	PACKER -3 BAG FILTER	0.785	325	12.45	3.14	9.2		0.002	
	June'19								
06.06.19	PACKER -3 BAG FILTER	0.785	327	25.97	2.77	14.3	**13.7**	0.003	
13.06.19	PACKER -3 BAG FILTER	0.785	328	26.24	2.94	13.7		0.003	
20.06.19	PACKER -3 BAG FILTER	0.785	326	25.68	3.07	12.9		0.003	
27.06.19	PACKER -3 BAG FILTER	0.785	326	25.68	3.18	13.9		0.004	
	July'19								
04.07.19	PACKER -3 BAG FILTER	0.785	328	12.31	3.15	12.9	**13.8**	0.004	
11.07.19	PACKER -3 BAG FILTER	0.785	323	11.22	2.86	14.0		0.003	
18.07.19	PACKER -3 BAG FILTER	0.785	324	12.48	3.17	12.5		0.003	
25.07.19	PACKER -3 BAG FILTER	0.785	325	12.10	3.09	15.7		0.004	
	August'19								
07.08.19	PACKER -3 BAG FILTER	0.785	324	12.58	3.21	11.0	**13.9**	0.003	
14.08.19	PACKER -3 BAG FILTER	0.785	326	12.07	3.07	13.4		0.004	
21.08.19	PACKER -3 BAG FILTER	0.785	328	12.36	3.13	13.6		0.004	
28.08.19	PACKER -3 BAG FILTER	0.785	327	11.77	3	17.6		0.005	
	September'19								
05.09.19	PACKER -3 BAG FILTER	0.785	325	11.95	3.06	11.0	**12.4**	0.003	
12.09.19	PACKER -3 BAG FILTER	0.785	326	12.62	3.22	11.4		0.003	
19.09.19	PACKER -3 BAG FILTER	0.785	327	11.77	2.99	12.3		0.003	
26.09.19	PACKER -3 BAG FILTER	0.785	324	12.34	3.12	14.9		0.004	

	April'19								
01.04.19	PACKER -4 BAG FILTER	0.785	327	11.61	2.92	12.4	**12.7**	0.003	
08.04.19	PACKER -4 BAG FILTER	0.785	326	11.81	2.98	13.3		0.003	
15.04.19	PACKER -4 BAG FILTER	0.785	325	12.45	3.14	12.2		0.003	
22.04.19	PACKER -4 BAG FILTER	0.785	322	11.94	3.01	12.8		0.003	
	May'19								
04.05.19	PACKER -4 BAG FILTER	0.785	325	11.95	2.77	8.1	9.9	0.002	
11.05.19	PACKER -4 BAG FILTER	0.785	327	11.72	2.95	10.3		0.003	
18.05.19	PACKER -4 BAG FILTER	0.785	326	12.12	3.07	8.8		0.002	
25.05.19	PACKER -4 BAG FILTER	0.785	325	12.20	3.07	12.5		0.003	
	June'19								
06.06.19	PACKER -4 BAG FILTER	0.785	327	25.97	2.80	11.5	**12.3**	0.003	
13.06.19	PACKER -4 BAG FILTER	0.785	326	25.68	2.94	12.7		0.003	
20.06.19	PACKER -4 BAG FILTER	0.785	325	25.40	3.18	12.0		0.003	
27.06.19	PACKER -4 BAG FILTER	0.785	322	24.54	3.01	12.8		0.003	
	July'19								
04.07.19	PACKER -4 BAG FILTER	0.785	328	11.30	2.88	11.2	**12.2**	0.003	
11.07.19	PACKER -4 BAG FILTER	0.785	327	12.14	3.05	11.1		0.003	
18.07.19	PACKER -4 BAG FILTER	0.785	325	12.25	3.12	12.3		0.003	
25.07.19	PACKER -4 BAG FILTER	0.785	326	11.96	3.02	14.0		0.004	
	August'19								
07.08.19	PACKER -4 BAG FILTER	0.785	324	11.07	2.83	12.0	**13.4**	0.003	
14.08.19	PACKER -4 BAG FILTER	0.785	329	11.65	2.95	12.8		0.003	
21.08.19	PACKER -4 BAG FILTER	0.785	327	11.88	3.00	13.7		0.004	
28.08.19	PACKER -4 BAG FILTER	0.785	325	12.40	3.15	14.9		0.004	
	September'19								
05.09.19	PACKER -4 BAG FILTER	0.785	326	11.21	2.86	12.2	**13.7**	0.003	
12.09.19	PACKER -4 BAG FILTER	0.785	328	11.02	2.80	13.7		0.003	
19.09.19	PACKER -4 BAG FILTER	0.785	324	12.08	3.06	13.6		0.004	
26.09.19	PACKER -4 BAG FILTER	0.785	327	12.39	3.13	15.2		0.004	

J.K. Cement WORKS, Mangrol (RAJ)

Treated Domestic Effluent Analysis Report

April' 2019 - September' 2019

S.No.	PARAMETER	Standards	April-19	May-19	June-19	July-19	August-19	September-19
1	pH	Between 5.5 to 9.0	7.71	7.66	7.39	8.1	6.5	6.67
2	Chlorides as Cl	Not to exceed 1000 mg/l	147	125	137	123.0	106.0	112.5
3	Total Suspended solids	Not to exceed 100 mg/l	3.9	<2.5	<2.5	<2.5	4.5	<2.5
4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	6.2	<2.0	2.8	<2.0	4.2	<2.0
5	Chemical Oxygen Demand	Not to exceed 250 mg/l	26	<4.0	12	7.8	25.0	11.1
6	Oil & Grease	Not to exceed 10 mg/l	<1.4	<1.4	<1.4	<1.4	<3.0	<3.0
7	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	<0.1	<0.1	<0.1	0.1	0.9	<0.1
8	Sulphide (as S)	Not to exceed 2.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
9	Total Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

J.K. Cement Works, Mangrol (Unit-1)
Fugitive Emission Monitoring Report
April' 2019 - September' 2019

S.No.	Month/Year	SPM (µg/m3)			
		NEAR COAL YARD-1	NEAR LIMESTONE CRUSHING SITE-1	NEAR STACKER RECLAIMER-1	NEAR GYPSUM YARD-1
1	Apr-19	1181.0	2272.0	2870.0	2037.0
2	May-19	1852.0	2008.0	2958.0	2091.0
3	Jun-19	1304.0	1649.0	3050.0	2116.0
4	Jul-19	976.0	1494.0	2205.0	1245.0
5	Aug-19	1150.0	1272.0	1195.0	890.0
6	Sep-19	1196.0	1244.0	1319.0	950.0

J.K. Cement Works, Mangrol (Unit-2)
Fugitive Emission Monitoring Report
(April' 2019 -September' 2019)

S.No.	Month/Year	SPM (µg/m3)			
		NEAR COAL YARD-2	NEAR LIMESTONE CRUSHING SITE 2	NEAR STACKER RECLAIMER-2	NEAR GYPSUM YARD-2
1	Apr-19	1276.0	2053.0	1758.0	1884.0
2	May-19	1446.0	2083.0	2474.0	2836.0
3	Jun-19	1675.0	2216.0	2293.0	2069.0
4	Jul-19	1776.0	2357.0	2153.0	1869.0
5	Aug-19	1120.0	1650.0	1385.0	1005.0
6	Sep-19	1089.0	1250.0	1369.0	1184.0

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

Noise Monitoring Report

Month	Mangrol Plant (April-19 to September-19) (Unit - 1 & 2)							
	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

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/19-20/05734/001
Issued Date	:	2019-08-23
Your Ref	:	4600057999
And Date	:	27/06/2019

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-1

Sample Registration Date	:	2019-08-13	Sample Collection Date	:	2019-08-08
Analysis Starting Date	:	2019-08-13	Analysis Completion Date	:	2019-09-23
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	-	2.58	--
2	Flue gas temperature	^0C	-	150	--
3	Fuel	-	Coal+ pet coke+ co-processing of waste	-	--
4	Oxygen as O_2	%	Flue Gas Analyzer	10.9	--
5	Velocity	m/sec	-	11.9	--
6	Volumetric flow rate	Nm^3/Sec	-	42.66	--
7	Particulate Matter	mg/Nm^3	USEPA method-5	16.8	30
8	Sulphur Dioxide	mg/Nm^3	Flue Gas Analyzer	36	100
9	Oxides of Nitrogen	mg/Nm^3	Flue Gas Analyzer	725	800
10	HCl	mg/Nm^3	USEPA method -26	2.7	10
11	HF	mg/Nm^3	USEPA method -13	0.44	1.0
12	Carbon Monoxide as CO	mg/Nm^3	Flue Gas Analyzer	62	100
13	Carbon Dioxide as CO_2	%	Flue Gas Analyzer	9.2	-
14	TOC	mg/nm^3	USEPA method -40 & MM5(10)	4.1	10

All the Values are represented at 10% O_2

Dr. Subba Reddy Mallampati
Group Leader-Environment

Scanned by CamScanner

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/19-20/05734/001
Issued Date	:	2019-08-23
Your Ref	:	4600057999
And Date	:	27/06/2019

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-1

Sample Registration Date	:	2019-08-13	Sample Collection Date	:	2019-08-08
Analysis Starting Date	:	2019-08-13	Analysis Completion Date	:	2019-08-23
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	mg/Nm^3	USEPA method -29	<0.001	0.05
3	Chromium as Cr + their Compound	mg/Nm^3	USEPA method -29	0.028	0.5
4	Manganese as Mn + their Compound	mg/Nm^3	USEPA method -29	0.019	
5	Arsenic as As + their Compound	mg/Nm^3	USEPA method -29	0.012	
6	Antimony as Sb + their Compound	mg/Nm^3	USEPA method -29	0.010	
7	Lead as Pb + their Compound	mg/Nm^3	USEPA method -29	0.022	
8	Cobalt as Co + their Compound	mg/Nm^3	USEPA method -29	0.011	
9	Copper as Cu + their Compound	mg/Nm^3	USEPA method -29	0.014	
10	Nickel as Ni + their Compound	mg/Nm^3	USEPA method -29	0.020	
11	Vanadium as V + their Compound	mg/Nm^3	USEPA method -29	0.003	

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

Dr. Subba Reddy Mallampati
Group Leader-Environment

Scanned by CamScanner

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/19-20/05734/001
Issued Date : 2019-08-23
Your Ref : 4600057999
And Date : 27/06/2019

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-1

Sample Registration Date	: 2019-08-13	Sample Collection Date	: 2019-08-08
Analysis Starting Date	: 2019-08-13	Analysis Completion Date	: 2019-08-23
Test Required	: PCDD & PCDF		
SAMPLE COLLECTED BY VIMTA LABS LTD.			

TEST REPORT

Sr.No.	PARAMETERS	UOM	RESULTS
EMISSION RATES			
1	Diameter of the Stack	m	2.58
2	Temperature	°C	150
3	Velocity	m/sec	11.9
4	Volumetric flow rate	Nm^3/Sec	42.66
DIOXIN AND FURANS			
5	2,3,7,8-TCDF	ng/Nm^3, TEQ	0.0048
6	1,2,3,7,8-PeCDF	ng/Nm^3, TEQ	0.0044
7	2,3,4,7,8-PeCDF	ng/Nm^3, TEQ	0.0012
8	1,2,3,4,7,8-HxCDF	ng/Nm^3, TEQ	0.0019
9	1,2,3,6,7,8-HxCDF	ng/Nm^3, TEQ	0.0023
10	2,3,4,6,7,8-HxCDF	ng/Nm^3, TEQ	0.0019
11	1,2,3,7,8,9-HxCDF	ng/Nm^3, TEQ	0.0035
12	1,2,3,4,6,7,8-HpCDF	ng/Nm^3, TEQ	0.0058
13	1,2,3,4,7,8,9-HpCDF	ng/Nm^3, TEQ	0.0008
14	OCDF	ng/Nm^3, TEQ	0.0024
15	2,3,7,8-TCDD	ng/Nm^3, TEQ	0.0009
16	1,2,3,7,8-PeCDD	ng/Nm^3, TEQ	0.0046
17	1,2,3,4,7,8-HxCDD	ng/Nm^3, TEQ	0.0014
18	1,2,3,6,7,8-HxCDD	ng/Nm^3, TEQ	0.0000
19	1,2,3,7,8,9-HxCDD	ng/Nm^3, TEQ	0.0019
20	1,2,3,4,6,7,8-HpCDD	ng/Nm^3, TEQ	0.0029
21	OCDD	ng/Nm^3, TEQ	0.0064
Total Furans & Dioxins		**ng/Nm^3, TEQ**	**0.0471**
Total Furans & Dioxins		**ng/Nm^3, TEQ Corrected to 10% O_2 Concentration**	**0.0513**
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. Subba Reddy Mallampati
Group Leader-Environment

Scanned by CamScanner

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/19-20/05734/002
Issued Date	:	2019-08-23
Your Ref	:	4600057999
And Date	:	27/06/2019

SAMPLE PARTICULARS	:	Stack Connected to Bag House Kiln-II			
Sample Registration Date	:	2019-08-13	Sample Collection Date	:	2019-08-07
Analysis Starting Date	:	2019-08-13	Analysis Completion Date	:	2019-09-23
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	-	121	--
3	Fuel	-	Coal+ pet coke+ co-processing of waste	-	--
4	Oxygen as O_2	%	Flue Gas Analyzer	10.2	--
5	Velocity	m/sec	-	7.85	--
6	Volumetric flow rate	Nm^3/Sec	-	81.32	--
7	Particulate Matter	mg/Nm^3	USEPA method-5	15.5	30
8	Sulphur Dioxide	mg/Nm^3	Flue Gas Analyzer	40	100
9	Oxides of Nitrogen	mg/Nm^3	Flue Gas Analyzer	741	800
10	HCl	mg/Nm^3	USEPA method -26	2.9	10
11	HF	mg/Nm^3	USEPA method -13	0.49	1.0
12	Carbon Monoxide as CO	mg/Nm^3	Flue Gas Analyzer	55	100
13	Carbon Dioxide as CO_2	%	Flue Gas Analyzer	9.5	-
14	TOC	mg/nm^3	USEPA method -40 & MM5(10)	4.6	10

All the Values are represented at 10% O_2

Dr. Subba Reddy Mallampati
Group Leader-Environment

Scanned by CamScanner

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/19-20/05734/002
Issued Date	:	2019-08-23
Your Ref	:	4600057999
And Date	:	27/06/2019

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-II

Sample Registration Date	:	2019-08-13	Sample Collection Date	:	2019-08-07
Analysis Starting Date	:	2019-08-13	Analysis Completion Date	:	2019-08-23
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	mg/Nm^3	USEPA method -29	<0.001	0.05
3	Chromium as Cr + their Compound	mg/Nm^3	USEPA method -29	0.022	0.5
4	Manganese as Mn + their Compound	mg/Nm^3	USEPA method -29	0.012	
5	Arsenic as As + their Compound	mg/Nm^3	USEPA method -29	0.010	
6	Antimony as Sb + their Compound	mg/Nm^3	USEPA method -29	0.006	
7	Lead as Pb + their Compound	mg/Nm^3	USEPA method -29	0.027	
8	Cobalt as Co + their Compound	mg/Nm^3	USEPA method -29	0.019	
9	Copper as Cu + their Compound	mg/Nm^3	USEPA method -29	0.011	
10	Nickel as Ni + their Compound	mg/Nm^3	USEPA method -29	0.016	
11	Vanadium as V + their Compound	mg/Nm^3	USEPA method -29	0.006	

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

Dr. Subba Reddy Mallampati
Group Leader-Environment

Scanned by CamScanner

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/19-20/05734/002
Issued Date	:	2019-08-23
Your Ref	:	4600057999
And Date	:	27/06/2019

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-II

Sample Registration Date	:	2019-08-13	Sample Collection Date	:	2019-08-07
Analysis Starting Date	:	2019-08-13	Analysis Completion Date	:	2019-08-23
Test Required	:	PCDD & PCDF			

SAMPLE COLLECTED BY VIMTA LABS LTD.

TEST REPORT

Sr.No.	PARAMETERS	UOM	RESULTS
EMISSION RATES			
1	Diameter of the Stack	m	4.25
2	Temperature	°C	121
3	Velocity	m/sec	7.85
4	Volumetric flow rate	Nm^3/Sec	81.32
DIOXIN AND FURANS			
5	2,3,7,8-TCDF	ng/Nm^3, TEQ	0.0056
6	1,2,3,7,8-PeCDF	ng/Nm^3, TEQ	0.0049
7	2,3,4,7,8-PeCDF	ng/Nm^3, TEQ	0.0019
8	1,2,3,4,7,8-HxCDF	ng/Nm^3, TEQ	0.0025
9	1,2,3,6,7,8-HxCDF	ng/Nm^3, TEQ	0.0027
10	2,3,4,6,7,8-HxCDF	ng/Nm^3, TEQ	0.0026
11	1,2,3,7,8,9-HxCDF	ng/Nm^3, TEQ	0.0039
12	1,2,3,4,6,7,8-HpCDF	ng/Nm^3, TEQ	0.0064
13	1,2,3,4,7,8,9-HpCDF	ng/Nm^3, TEQ	0.0009
14	OCDF	ng/Nm^3, TEQ	0.0029
15	2,3,7,8-TCDD	ng/Nm^3, TEQ	0.0012
16	1,2,3,7,8-PeCDD	ng/Nm^3, TEQ	0.0054
17	1,2,3,4,7,8-HxCDD	ng/Nm^3, TEQ	0.0019
18	1,2,3,6,7,8-HxCDD	ng/Nm^3, TEQ	0.0000
19	1,2,3,7,8,9-HxCDD	ng/Nm^3, TEQ	0.0024
20	1,2,3,4,6,7,8-HpCDD	ng/Nm^3, TEQ	0.0036
21	OCDD	ng/Nm^3, TEQ	0.0076
Total Furans & Dioxins		**ng/Nm^3, TEQ**	**0.0564**
Total Furans & Dioxins		**ng/Nm^3, TEQ Corrected to 10% O_2 Concentration**	**0.0575**
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. Subba Reddy Mallampati
Group Leader-Environment

Scanned by CamScanner

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/2019-20/921
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01400
Sample Description : Stack Emission
Date & Time of Sampling: 05.08.2019 at 02.00 p.m
Sampling Location : Limestone Crusher (Line - 1)

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	: 0.7 m	
3.Area of Stack	: 0.385 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 34	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 16.76	EPA Part 2
4.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 Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

MITRA S.K. PVT. LTD.

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/2019-20/922
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01401
Sample Description : Stack Emission
Date & Time of Sampling: 06.08.2019 at 01.45 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 m²	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 29	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 16.50	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm³)	: 18.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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/2019-20/923
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01408
Sample Description : Stack Emission
Date & Time of Sampling: 05.08.2019 at 03.20 p.m
Sampling Location : Kiln & Raw mill stack (Line – 1)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Kiln & Raw mill	
2.Emission due to	: Burning of Limestone & additive	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 88.3 m	
2.Diameter of the Stack at sampling point	: 2.58 m	
3.Area of Stack	: 5.23 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 151	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 20.50	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 12.8	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 528.0	EPA Part-7
6.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	: Bag House	
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/2019-20/924
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01409
Sample Description : Stack Emission
Date & Time of Sampling: 06.08.2019 at 03.20 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	: 145.1 m	
2.Diameter of the Stack at sampling point	: 4.25 m	
3.Area of Stack	: 14.19 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 153	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 20.29	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 18.50	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 694.0	EPA Part-7
6.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 House	
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/2019-20/917
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01396
Sample Description : Stack Emission
Date & Time of Sampling: 05.08.2019 at 12.20 P.M
Sampling Location : Coal Mill (Line – 1)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Coal mill	
2.Emission due to	: Grinding of coal	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 30 m	
2.Diameter of the Stack at sampling point	: 0.76 m	
3.Area of Stack	: 0.453 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 69	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 17.74	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 13.9	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

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/2019-20/918
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01397
Sample Description : Stack Emission
Date & Time of Sampling: 06.08.2019 at 12.00 P.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	
2.Diameter of the Stack at sampling point	: 1.6 m	
3.Area of Stack	: 2.01 m²	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 68	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 17.78	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm³)	: 15.0	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/2019-20/915
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01394
Sample Description : Stack Emission
Date & Time of Sampling: 05.08.2019 at 09.10 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	: 30.0 m	
2.Diameter of the Stack at sampling point	: 0.80 m	
3.Area of Stack	: 0.502 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 92	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.54	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: **14.4**	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/2019-20/916
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01395
Sample Description : Stack Emission
Date & Time of Sampling: 06.08.2019 at 09.00 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)	: 96	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 11.96	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 18.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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/2019-20/919
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01398
Sample Description : Stack Emission
Date & Time of Sampling: 05.08.2019 at 10.40 A.M
Sampling Location : Clinker Cooler (Line – 1)

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	: 40.0 m	
2.Diameter of the Stack at sampling point	: 3.0 m	
3.Area of Stack	: 7.07 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 114	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.43	EPA Part 2
4.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	: 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/2019-20/920
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01399
Sample Description : Stack Emission
Date & Time of Sampling: 06.08.2019 at 10.30 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)	: 118	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.75	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: **19.5**	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

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/2019-20/925
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01402
Sample Description : Stack Emission
Date & Time of Sampling: 05.08.2019 at 04.30 p.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 m²	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Concentration of Particulate Matters (mg/Nm³)	: 13.0	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. PVT. LTD.

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/2019-20/926
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01403
Sample Description : Stack Emission
Date & Time of Sampling: 05.08.2019 at 05.30 P.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 m²	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Concentration of Particulate Matters (mg/Nm³)	: 10.0	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/2019-20/927
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01404
Sample Description : Stack Emission
Date & Time of Sampling: 06.08.2019 at 04.40 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 m²	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Concentration of Particulate Matters (mg/Nm³)	: 9.0	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/2019-20/928
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01405
Sample Description : Stack Emission
Date & Time of Sampling: 06.08.2019 at 05.40 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)	: 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

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/2019-20/929
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01410 to 01413
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.	05/06.08.2019	Near Packing Plant Gate (Mangrol Plant)	59.6	42.8
2.		Near Time Office (Mangrol Plant)	53.4	40.2
3.		Near Thermal Power Plant (Mangrol Plant)	67.3	45.4
4.		Near Raw Material gate (Mangrol Plant)	61.0	43.6
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.

Authorized 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/2019-20/897
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00702
Sample Description : Ambient Air
Sampling Location : Near Time Office
Date of Sampling : 05/06.08.2019

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	38	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	20	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	28.7	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.66	IS 5182 :(Part-10) :1999

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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

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/2019-20/898
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00703
Sample Description : Ambient Air
Sampling Location : Near Thermal Power Plant
Date of Sampling : 05/06.08.2019

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	49	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	22	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	7.9	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	30.3	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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized 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/2019-20/899
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00704
Sample Description : Ambient Air
Sampling Location : Near Factory Gate
Date of Sampling : 05/06.08.2019

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	42	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	24	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	7.6	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	28.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.76	IS 5182 :(Part-10) :1999

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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized 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/2019-20/900
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00705
Sample Description : Ambient Air
Sampling Location : Near Colony Gate
Date of Sampling : 05/06.08.2019

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	49	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	28	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	26.4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.62	IS 5182 :(Part-10) :1999

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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/597
Date : 31.07.2019
Sample No. : MSKGL/ED/2019-20/07/01511
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 16.07.2019

Reference No.& Date : 4600056104 , dtd- 22.04.2019

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	8.10
2.	Chloride as Cl	mg/l	1000	123.0
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	7.8
6.	Oil & Grease	mg/l	10	<1.4
7.	Ammonical Nitrogen (as N)	mg/l	50	0.12
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.

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
Vill-Mangrol,Teh- Nimbahera,
Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2019-20/949
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00713
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 03.08.2019

Reference No.& Date : 4600056104 , dtd- 22.04.2019

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	6.48
2.	Chloride as Cl	mg/l	1000	106.0
3.	Total Suspended solids	mg/l	100	4.5
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	4.2
5.	Chemical Oxygen Demand	mg/l	250	25.0
6.	Oil & Grease	mg/l	10	<3.0
7.	Ammonical Nitrogen (as N)	mg/l	50	0.92
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.

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
Vill-Mangrol,Teh- Nimbahera,
Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2019-20/1094
Date : 30.09.2019
Sample No. : MSKGL/ED/2019-20/09/00230
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 11.09.2019

Reference No.& Date : 4600056104 , dtd- 22.04.2019

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	6.67
2.	Chloride as Cl	mg/l	1000	112.5
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	11.1
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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/385
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01680
Sample Description : Stack Emission
Date & Time of Sampling: 14.06.2019 at 03.30 p.m
Sampling Location : Limestone Crusher (Line - 1)

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	: 0.7 m	
3.Area of Stack	: 0.385 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 31	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 18.8	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 19.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/386
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01681
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2019 at 03.30 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)	: 30	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 17.4	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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/415
Date : 10.07.2019
Sample No. : MSKGL/ED/2019-20/06/01665
Sample Description : Stack Emission
Date & Time of Sampling: 14.06.2019 at 09.30 a.m
Sampling Location : Kiln & Raw mill stack (Line – 1)

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

ANALYSIS RESULT

A. General information about stack	
1. Stack connected to	: Kiln & Raw mill
2.Emission due to	: Burning of Limestone & additive
3.Material of construction of Stack	: Mild Steel
4.Shape of Stack	: Circular
5.Whether Stack is provided with permanent platform & ladder	: Yes
B. Physical characteristics of stack	
1.Height of the stack from ground level	: 88.3 m
2.Diameter of the Stack at sampling point	: 2.58 m
3.Area of Stack	: 5.23 m^2
C. Results of sampling & analysis of gaseous emission	**Result**
1.Temperature of emission (°C)	: 154
2.Barometric pressure (mm of Hg)	: 735
3.Velocity of gas (m/sec)	: 18.89
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 20.6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 714.0
6.Concentration of Particulate Matters (mg/Nm^3)	: 12.66
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. Pvt. Ltd.

Authorised Signatory

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/416
Date : 10.07.2019
Sample No. : MSKGL/ED/2019-20/06/01666
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2019 at 90.30 a.m
Sampling Location : Kiln & Raw mill stack (Line – 2)

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

ANALYSIS RESULT

A. General information about stack	
1. Stack connected to	: Kiln & Raw mill
2.Emission due to	: Burning of Limestone & additive
3.Material of construction of Stack	: Mild Steel
4.Shape of Stack	: Circular
5.Whether Stack is provided with permanent platform & ladder	: Yes
B. Physical characteristics of stack	
1.Height of the stack from ground level	: 145.1 m
2.Diameter of the Stack at sampling point	: 4.25 m
3.Area of Stack	: 14.19 m^2
C. Results of sampling & analysis of gaseous emission	**Result**
1.Temperature of emission (°C)	: 156
2.Barometric pressure (mm of Hg)	: 735
3.Velocity of gas (m/sec)	: 17.70
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 11.2
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 770.0
6.Concentration of Particulate Matters (mg/Nm^3)	: 10.27
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

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

T : 91 33 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/2019-20/375
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01670
Sample Description : Stack Emission
Date & Time of Sampling: 14.06.2019 at 10.30 A.M
Sampling Location : Coal Mill (Line – 1)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Coal mill	
2.Emission due to	: Grinding of coal	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 30 m	
2.Diameter of the Stack at sampling point	: 0.76 m	
3.Area of Stack	: 0.453 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 72	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 20.6	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	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/376
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01671
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2019 at 10.30 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	
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)	: 70	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 19.0	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 18.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/377
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01672
Sample Description : Stack Emission
Date & Time of Sampling: 14.06.2019 at 12.00 P.M
Sampling Location : Clinker Cooler (Line – 1)

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	: 35.5 m	
2.Diameter of the Stack at sampling point	: 3.0 m	
3.Area of Stack	: 7.07 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 117	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.0	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 20.0	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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/378
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01673
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2019 at 12.00 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	: 34.1 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)	: 120	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.6	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 24.0	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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/379
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01674
Sample Description : Stack Emission
Date & Time of Sampling: 14.06.2019 at 02.00 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	
2.Diameter of the Stack at sampling point	: 0.80 m	
3.Area of Stack	: 0.502 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 90	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.6	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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/380
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01675
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2019 at 02.00 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)	: 11.4	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

Authorised Signatory

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/381
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01676
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2019 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)	: 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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/382
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01677
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2019 at 10.30 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)	: 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

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

T : 91 33 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/2019-20/383
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01678
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2019 at 11.30 a.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)	: 8.0	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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/384
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01679
Sample Description : Stack Emission
Date & Time of Sampling: 12.06.2019 at 12.30 P.M
Sampling Location : Packer 4 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Packer 4	
2.Emission due to	: NA	
3.Material of construction of Stack	: MS	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 30.0 m	
2.Diameter of the Stack at sampling point	: 1.0 m	
3.Area of Stack	: 0.7857 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Concentration of Particulate Matters (mg/Nm^3)	: 10.0	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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/336
Date : 30.06.2019
Sample No. : MSKGL/ED/2019-20/06/01389
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 11.06.2019

Reference No.& Date : 4600056104 , dtd- 22.04.2019

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	7.39
2.	Chloride as Cl	mg/l	1000	137.0
3.	Total Suspended solids	mg/l	100	<2.5
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	2.8
5.	Chemical Oxygen Demand	mg/l	250	12.0
6.	Oil & Grease	mg/l	10	<1.4
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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/148
Date : 10.05.2019
Sample No. : MSKGL/ED/2019-20/04/01124
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 25.04.2019

Reference No.& Date : 4600056104 , dtd- 22.04.2019

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	7.71
2.	Chloride as Cl	mg/l	1000	147.0
3.	Total Suspended solids	mg/l	100	3.9
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	6.2
5.	Chemical Oxygen Demand	mg/l	250	26.0
6.	Oil & Grease	mg/l	10	<1.4
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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/221
Date : 31.05.2019
Sample No. : MSKGL/ED/2019-20/05/00884
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 14.05.2019

Reference No.& Date : 4600056104 , dtd- 22.04.2019

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	7.66
2.	Chloride as Cl	mg/l	1000	125.0
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	<1.4
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

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/395
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01691
Sample Description : Ambient Air
Sampling Location : Near Time Office
Date of Sampling : 13/14.06.2019

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	79	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	45	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	6.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	24.3	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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S. K. Private Limited

MSK
TESTING • INSPECTION

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

T : 91 33 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/2019-20/396
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01692
Sample Description : Ambient Air
Sampling Location : Near Thermal Power Plant
Date of Sampling : 13/14.06.2019

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	89	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	47	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	8.5	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	32.6	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.98	IS 5182 :(Part-10) :1999

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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatoray

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/2019-20/397
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01693
Sample Description : Ambient Air
Sampling Location : Near Factory Gate
Date of Sampling : 13/14.06.2019

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	96	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	56	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	27.5	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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

MSK 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/2019-20/398
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01694
Sample Description : Ambient Air
Sampling Location : Near Colony Gate
Date of Sampling : 13/14.06.2019

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	82	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	42	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	7.6	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	22.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.64	IS 5182 :(Part-10) :1999

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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S. K. Private Limited

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

T : 91 33 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/2019-20/408
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/01699 to 01702
Sample Description : Noise Monitoring

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

ANALYSIS RESULT

Sl. No.	Sampling Date	Sampling Location	Results Leq dB(A)	
			Day Time	Night Time
1.	13/14.06.2019	Near Packing Plant Gate (Mangrol Plant)	61.9	44.7
2.		Near Time Office (Mangrol Plant)	52.5	41.2
3.		Near Thermal Power Plant (Mangrol Plant)	64.2	43.1
4.		Near Raw Material gate (Mangrol Plant)	63.8	45.4
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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

Report No. : MSK/UDR/2019-20/931
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01418
Sample Description : Flue Gas Monitoring
Sampling Location : 25MW Thermal Power Plant
Date & Time of Sampling : 08.08.2019 at 03.00 P.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	: 10.69 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)	: 121	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 9.8	EPA Part 2
4.Concentration of Oxygen (% v/v)	: 6.4	IS 13270:1992,Reaf:2014
5.Conc. of Particulate Matters (mg/Nm^3) at 6% O_2 on dry basis	: 24.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack	: ESP	
F. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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

Report No. : MSK/UDR/2019-20/932
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01419
Sample Description : Flue Gas Monitoring
Sampling Location : Coal crusher Plant
Date & Time of Sampling : 08.08.2019 at 01.00 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	: 0.795 m	
3.Height of the sampling point from GL	: 7.0 m	
4.Area of Stack	: 0.496 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 50	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.6	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 20.0	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

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 :
Thermax Ltd.
C/o J.K.Cement Works, Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/942
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00873
Sample Description : Treated Effluent Water
Sample Location : 25 MW TPP
Date of Collection : 16.08.2019

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	6.50
2.	Total Suspended solids (TSS)	mg/l	100	28.0
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	0.13
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	0.26
12.	Chemical Oxygen Demand as COD	mg/l	250.0	26.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	4.8

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 :
Thermax Ltd.
C/o J.K.Cement Works, Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/943
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00874
Sample Description : Treated Effluent Water
Sample Location : 10 MW WHR
Date of Collection : 16.08.2019

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	7.60
2.	Total Suspended solids (TSS)	mg/l	100	8.3
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	0.39
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	3.0
12.	Chemical Oxygen Demand as COD	mg/l	250.0	18.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	2.6

Report Prepared by :

For Mitra S.K. Private Limited

MITRA S.K. PVT. LTD.

Authorised Signatory

Mitra S. K. Private Limited

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

T : 91 33 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 :
Thermax Ltd.
J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/410
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/02345
Sample Description : Flue Gas Monitoring
Sampling Location :25MW Thermal Power Plant
Date & Time of Sampling : 12.06.2019 at 03.00 P.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	: 10.69 m²	
C. Analysis/Characteristic of stack		
1. Fuel used : Coal		
D. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 124	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 9.3	EPA Part 2
4.Concentration of Oxygen (% v/v)	: 6.4	IS 13270:1992,Reaf:2014
5.Conc. of Particulate Matters (mg/Nm^3) at 6% O_2 on dry basis	: 30.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack	: ESP	
F. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

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

T : 91 33 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 :
Thermax Ltd.
J.K.Cement Works Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/411
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/02346
Sample Description : Flue Gas Monitoring
Sampling Location : Coal crusher Plant
Date & Time of Sampling : 12.06.2019 at 01.30 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	: 0.795 m	
3.Height of the sampling point from GL	: 7.0 m	
4.Area of Stack	: 0.496 m^2	
C. 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)	: 9.0	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 21.0	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

Authorised Signatory

Mitra S. K. Private Limited

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

T : 91 33 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 :
Thermax Ltd.
C/o J.K.Cement Works, Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/363
Date : 05.07.2019
Sample No. : MSKGL/ED/2019-20/06/01419
Sample Description : Treated Effluent Water
Sample Location : 25 MW TPP
Date of Collection : 12.06.2019

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	7.41
2.	Total Suspended solids (TSS)	mg/l	100	30.0
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	2.7
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	0.63
12.	Chemical Oxygen Demand as COD	mg/l	250.0	29.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	4.6

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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

T : 91 33 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/2019-20/364
Date : 05.07.2019
Sample No. : MSKGL/ED/2019-20/06/01420
Sample Description : Treated Effluent Water
Sample Location : 10 MW WHR
Date of Collection : 12.06.2019

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	7.51
2.	Total Suspended solids (TSS)	mg/l	100	59.0
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	0.75
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	0.66
12.	Chemical Oxygen Demand as COD	mg/l	250.0	16.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	2.4

Report Prepared by :

For Mitra S.K. Private Limited

MITRA S.K. PVT. LTD.

Authorised Signatory