JK Cement LTD.
Regd. AD.

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

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

CIN : L17229UP1994PLC017199

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

Our Ref. No.: MGR-PC-21/ 3153

Date: 28.11.2018

To,

The Director,
Indira Paryavaran Bhavan,
JOR Bagh Road, Aliganj,
New Delhi-110003

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

Ref.: Environmental Clearance letter no. J-11011/267/2013-IA .II (I) dated. 08.09.2016

Dear Sir,

We are enclosing herewith the compliance report of Environmental Clearance conditions for Expansion of 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, by installation of an additional coal based Captive power plant of 35 MW to and WHRB from 10 MW to 20 MW by Installation of an additional waste heat recovery boiler of 10 MW at our J.K. Cement Works, Mangrol. We are submitting herewith compliance report **from the month of April' 2018 to September' 2018 in hard copy as well as mail as soft copy** for your kind reference and record. We trust you will find the same in order.

Thanking you,

Yours Faithfully
For J.K. Cement Works, Mangrol

S.K. Acharya
(Technical Head)

Encl: a/a
Copy to:

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

28.11.2018

J.K. Cement WORKS, Mangrol (RAJ)

Six monthly Compliance report of Environment Clearance for Mangrol Cement Plant for the period From April 2018 to September 2018

Reference Letter from MOEF, New Delhi - J-11015/267/2013-IA.II (I) Dated 08.09.2016

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.	We have installed the continuous emission monitoring system (CEMS) & Continuous ambient air monitoring system (CAAQMS) for our existing unit Line – 1 & line 2 and real time data obtained are being sent to CPCB & RPCB regularly. The same will be installed in proposed project after commissioning of Line – 3.
(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.	Complied with. We are achieving the new emission standard with respect to PM, SO2 & 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.
(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.	We have already provided in line-1 & 2 and we will be provide the continuous gaseous emission monitoring system for our proposed project Line – 3. All 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.	We are regularly doing efforts to achieve targets in our existing plant and will be complied the condition by installation of energy efficient equipment in our proposed project.
(v)	The National Air Quality Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16th November, 2009 shall be followed.	We have converted Kiln ESP in to Bag house and Cement mill-2 ESP into Bag house in Our Line-1 plant and provided ESP in clinker cooler & bag houses/ bag filter at all belt transfer point in our line-2 plant, & also will be installed in the proposed unit to comply the National Air Quality Standards issued by the Ministry

		vide G.S.R. no. 826 (E) dated 16th November, 2009.
(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.	We will be carried out the AAQ modelling based on the specific mitigative measures in the existing project and proposed expansion project to keep the emission well below the prescribed standards.
(vii)	Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.	We are in practice to conduct the fugitive emission monitoring regularly in our existing plant and controlled the emission by installing bag filters on material discharge point and water spraying in coal yard & other raw material yard. Guideline / Code of practice issued by the CPCB in this regard is followed.
(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.	Will be complied after commission of proposed project however we are continuously making efforts to reduce CO2 emissions from last 3 years. 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.	Being a process plant there is no any place for working where temperature is more than 50°C. However during shutdown we start working after cooling of equipment and same practice will be followed in proposed unit. Personal protective equipment are being provided to respective worker.
(x)	Arsenic and Mercury shall be monitored in emissions, ambient air and water.	Will be complied, Arsenic and mercury monitoring in emissions, ambient air & water is being carried out.
(xi)	The coal yard shall be lined and covered.	Coal yard of existing plant Line – 1 & line – 2 are in covered shed. Proposed Line – 3 also will be covered after installation of plant.
(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	There is no National park, Wildlife Sanctuary and forest area within 10 kms. of project area.

(xxvi)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.	We complying comply all recommendations made in the Charter on Corporate responsibility for Environment protection (CREP) for the Cement plants. Complying in our existing Unit 1 & 2.
(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 & will be complied with. We will submit action plan of CSR before starting the project work although we are regularly investing in around area as per local need.
(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 & will be complied with.
(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.	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 & also give training for the same.

(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.	We will take provisions for all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. during the construction of proposed plant.
	(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 are strictly adhere to stipulation made by RSPCB & State Government.
(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).	Agreed. We will take prior approval of the Ministry of Environment, Forest & Climate Change (MoEF& CC) for expansion or modification in the plant.
(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 are already having the 4 ambient air monitoring stations for PM 10, PM 2.5, SO2 & NOx are anticipate in consultation with the State Pollution Control Board and monitoring data is being regular submitting to the Ministry and its regional office at Lucknow and the SPCB/CPCB once in six month for existing Mangrol plant Line – 1 & Line 2 & same practice will be adopted in proposed Line – 3 and also establish four ambient air quality monitoring stations 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 after commissioning the plant. Monitoring report is enclosed as ***annexure-(I)***
(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 in the cement plant hence 'Zero discharge' facility adopted and only from CPP & WHR waste water after treatment are reuse for machineries cooling in the cement plant respectively.
(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).	Installed equipment inside the building to maintain noise level within the limit in the existing plant Line 1 & line 2.
(vi)	Occupational health surveillance of the workers shall be done on a regular basis	Occupational health surveillance of the workers is being done on regular basis in the existing cement plant Line 1 & 2. The same

	and records maintained as per the Factories Act.	practice will be adopted after commissioning of line – 3.
(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.	We have already developed 16 nos. of injection well and 1 recharge pond in the existing 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.	We will be earmarked towards cost and recurring cost / annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate change (MoEF& CC) as well as the state govt. Implementation schedule will be submit to Regional office of the Ministry at Lucknow before start of project activity.
(x)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/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.	A copy of Environmental clearance letter has been sent to the SDM, Nimbhaera tehsil, The Sarpanch, Gram panchayat, Mangrol, DIC, Chittorgarh, Chief Executive offier Zila parishad, Chittorgarh The District Magistrate, Chitorgarh Local body 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.	Agreed & We are regular uploading the status of compliance of the stipulated environment clearance conditions, including result of monitoring data of the existing plant on the company website periodically. The same is regularly being sent to regional office Lucknow. The criteria pollutant level namely; PM 10, SO2, NOx (ambient levels as well as stack emissions) for existing plant Line 1 & 2 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	We are regular submitting the six monthly compliance report of the stipulated environment conditions including result of monitored data (both in hard copies as well as by email) for existing plant to the regional office of MoEF& CC and zonal office of CPCB and

	and records maintained as per the Factories Act.	practice will be adopted after commissioning of line – 3.
(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.	We have already developed 16 nos. of injection well and 1 recharge pond in the existing 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.	We will be earmarked towards cost and recurring cost / annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate change (MoEF& CC) as well as the state govt. Implementation schedule will be submit to Regional office of the Ministry at Lucknow before start of project activity.
(x)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/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.	A copy of Environmental clearance letter has been sent to the SDM, Nimbhaera tehsil, The Sarpanch, Gram panchayat, Mangrol, DIC, Chittorgarh, Chief Executive offier Zila parishad, Chittorgarh The District Magistrate, Chitorgarh Local body 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.	Agreed & We are regular uploading the status of compliance of the stipulated environment clearance conditions, including result of monitoring data of the existing plant on the company website periodically. The same is regularly being sent to regional office Lucknow. The criteria pollutant level namely; PM 10, SO2, NOx (ambient levels as well as stack emissions) for existing plant Line 1 & 2 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	We are regular submitting the six monthly compliance report of the stipulated environment conditions including result of monitored data (both in hard copies as well as by email) for existing plant to the regional office of MoEF& CC and zonal office of CPCB and

Annexure-(I)

J.K. Cement WORKS, MANGROL (RAJ) (Unit-1)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
April' 2018 - September' 2018

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'2018								
03.04.2018	KILN + RAW MILL -1 (B.H.)	5.23	423	15.39	56.70	11.80	10.78	0.06	
12.04.2018	KILN + RAW MILL -1 (B.H.)	5.23	419	14.78	54.98	8.30		0.04	
20.04.2018	KILN + RAW MILL -1 (B.H.)	5.23	426	16.02	58.61	13.70		0.07	
27.04.2018	KILN + RAW MILL -1 (B.H.)	5.23	420	14.46	53.66	9.30		0.04	
	May'2018								
02.05.2018	KILN + RAW MILL -1 (B.H.)	5.23	425	15.10	55.37	12.30	12.3	0.059	
09.05.2018	KILN + RAW MILL -1 (B.H.)	Under Maintenance							
24.05.2018	KILN + RAW MILL -1 (B.H.)	5.23	420	15.80	58.63	14.60		0.074	
31.05.2018	KILN + RAW MILL -1 (B.H.)	5.23	418	14.87	55.44	10.00		0.048	
	June'2018								
04.06.2018	KILN + RAW MILL -1 (B.H.)	5.2	420	15.3	56.9	14.0	13.5	0.069	
12.06.2018	KILN + RAW MILL -1 (B.H.)	5.23	422	15.02	55.47	12.70		0.061	
18.06.2018	KILN + RAW MILL -1 (B.H.)	5.23	420	15.33	56.89	15.80		0.078	
25.06.2018	KILN + RAW MILL -1 (B.H.)	5.23	415	15.61	58.62	11.60		0.059	
	July'2018								
02-07-2018	KILN + RAW MILL (BH)	5.23	418	14.60	54.44	10.30	11.4	0.048	
09-07-2018	KILN + RAW MILL (BH)	5.23	420	15.91	59.04	13.80		0.070	
16-07-2018	KILN + RAW MILL (BH)	5.23	423	16.17	59.58	11.50		0.059	
23-07-2018	KILN + RAW MILL (BH)	5.23	416	15.42	57.77	9.80		0.049	
	August'2018								
06-08-2018	KILN + RAW MILL (BH)	5.23	424	15.41	56.64	11.70	12.8	0.057	
13-08-2018	KILN + RAW MILL (BH)	5.23	418	15.01	55.97	13.60		0.066	
20-08-2018	KILN + RAW MILL (BH)	5.23	425	15.90	58.31	13.80		0.070	
27-08-2018	KILN + RAW MILL (BH)	5.23	420	14.80	54.92	11.90		0.056	
	September'2018								
04.09.2018	KILN + RAW MILL (BH)	5.23	426	14.85	54.33	14.30	14.4	0.067	
11.09.2018	KILN + RAW MILL (BH)	5.23	420	15.33	56.89	14.00		0.069	
18.09.2018	KILN + RAW MILL (BH)	5.23	424	15.11	55.54	11.60		0.056	
25.09.2018	KILN + RAW MILL (BH)	5.23	422	15.69	57.95	17.70		0.089	
	April'2018								
03.04.2018	FOLAX COOLER (E.S.P)	7.07	418	9.21	46.42	38.40	37.6	0.15	
12.04.2018	FOLAX COOLER (E.S.P)	7.07	425	9.01	44.67	47.10		0.18	
20.04.2018	FOLAX COOLER (E.S.P)	7.07	421	10.04	50.24	30.30		0.13	
27.04.2018	FOLAX COOLER (E.S.P)	7.07	428	8.33	41.01	34.60		0.12	
	May'2018								
02.05.2018	FOLAX COOLER (E.S.P)	7.07	428	9.53	46.91	40.00	40.5	0.16	
09.05.2018	FOLAX COOLER (E.S.P)	Under Maintenance							
24.05.2018	FOLAX COOLER (E.S.P)	7.07	425.00	9.88	48.98	37.50		0.159	
31.05.2018	FOLAX COOLER (E.S.P)	7.07	422	9.97	49.78	44.00		0.189	
	June'2018								
04.06.2018	FOLAX COOLER (E.S.P)	7.1	425.0	10.1	49.8	38.9	35.4	0.167	
12.06.2018	FOLAX COOLER (E.S.P)	7.1	428	9.8	48.4	33.1		0.138	
18.06.2018	FOLAX COOLER (E.S.P)	7.07	429	10.26	50.39	30.00		0.131	
25.06.2018	FOLAX COOLER (E.S.P)	7.07	430	9.94	48.70	39.40		0.166	
	July'2018								
02-07-2018	CLINKER COOLER (ESP)	7.07	432	8.42	41.06	44.20	39.6	0.157	
09-07-2018	CLINKER COOLER (ESP)	7.07	427	9.95	49.09	34.10		0.145	
16-07-2018	CLINKER COOLER (ESP)	7.07	430	9.69	47.48	37.60		0.154	
23-07-2018	CLINKER COOLER (ESP)	7.07	426	8.00	39.57	42.30		0.145	
	August'2018								
06-08-2018	CLINKER COOLER (ESP)	7.07	435	9.26	44.85	37.00	38.1	0.143	
13-08-2018	CLINKER COOLER (ESP)	7.07	430	9.02	44.20	39.20		0.150	
20-08-2018	CLINKER COOLER (ESP)	7.07	438	9.64	46.37	36.00		0.144	
27-08-2018	CLINKER COOLER (ESP)	7.07	425	8.35	41.39	40.10		0.143	
	September'2018								
04.09.2018	CLINKER COOLER (ESP)	7.07	440	9.62	46.06	39.30	35.8	0.156	
11.09.2018	CLINKER COOLER (ESP)	7.07	435	9.91	48.00	32.80		0.136	
18.09.2018	CLINKER COOLER (ESP)	7.07	438	8.90	42.81	36.10		0.134	
25.09.2018	CLINKER COOLER (ESP)	7.07	434	9.06	43.98	34.80		0.132	

	April'2018								
03.04.2018	CEMENT MILL - 2 (B.F.)	0.50	378	8.41	3.32	16.60	12.6	0.005	
12.04.2018	CEMENT MILL - 2 (B.F.)	0.50	382	6.69	2.61	9.20		0.002	
19.04.2018	CEMENT MILL - 2 (B.F.)	0.50	376	7.86	3.11	13.80		0.004	
26.04.2018	CEMENT MILL - 2 (B.F.)	0.50	373	8.74	3.49	10.80		0.003	
	May'2018								
04.05.2018	CEMENT MILL - 2 (B.F.)	0.50	380	8.68	3.40	13.70	10.8	0.004	
11.05.2018	CEMENT MILL - 2 (B.F.)	0.50	379	8.10	3.18	9.20		0.003	
18.05.2018	CEMENT MILL - 2 (B.F.)	0.50	378	8.37	3.30	10.80		0.003	
25.05.2018	CEMENT MILL - 2 (B.F.)	0.50	375	8.18	3.25	9.60		0.003	
	June'2018								
02.06.2018	CEMENT MILL - 2 (B.F.)	0.50	378.00	8.17	3.22	12.30	12.5	0.003	
09.06.2018	CEMENT MILL - 2 (B.F.)	0.50	375	8.58	3.41	13.30		0.004	
16.06.2018	CEMENT MILL - 2 (B.F.)	0.50	380.00	8.83	3.46	13.00		0.00	
23.06.2018	CEMENT MILL - 2 (B.F.)	0.50	379	8.94	3.51	11.40		0.003	
	July'2018								
03-07-2018	CEMENT MILL No.-2 (ESP)	0.50	385	9.27	3.59	15.10	13.6	0.005	
10-07-2018	CEMENT MILL No.-2 (ESP)	0.50	379	8.34	3.28	14.60		0.004	
20-07-2018	CEMENT MILL No.-2 (ESP)	0.50	383	8.98	3.49	13.00		0.004	
26-07-2018	CEMENT MILL No.-2 (ESP)	0.50	374	9.50	3.78	11.80		0.004	
	August'2018								
07-08-2018	CEMENT MILL No.-2 (ESP)	0.50	382	8.97	3.50	11.10	11.2	0.003	
14-08-2018	CEMENT MILL No.-2 (ESP)	0.50	387	9.48	3.65	12.20		0.004	
21-08-2018	CEMENT MILL No.-2 (ESP)	0.50	379	8.22	3.23	10.40		0.003	
28-08-2018	CEMENT MILL No.-2 (ESP)	0.50	385	9.05	3.50	10.90		0.003	
	September'2018								
03.09.2018	CEMENT MILL No.-2 (ESP)	0.50	388	9.35	3.59	15.40	14.3	0.005	
12.09.2018	CEMENT MILL No.-2 (ESP)	0.50	385	9.01	3.49	18.30		0.006	
20.09.2018	CEMENT MILL No.-2 (ESP)	0.50	379	8.39	3.30	10.90		0.003	
28.09.2018	CEMENT MILL No.-2 (ESP)	0.50	382	8.28	3.23	12.40		0.003	
	April'2018								
03.04.2018	CRUSHER-1 (B.F.)	0.38	322	24.56	8.64	14.40	18.6	0.01	
12.04.2018	CRUSHER-1 (B.F.)	0.38	326	20.90	7.26	19.70		0.01	
20.04.2018	CRUSHER-1 (B.F.)	0.38	324	22.14	7.74	22.60		0.02	
27.04.2018	CRUSHER-1 (B.F.)	0.38	328	19.69	6.80	17.70		0.01	
	May'2018								
03.05.2018	CRUSHER-1 (B.F.)	0.38	323	24.50	8.59	18.10	22.4	0.013	
10.05.2018	CRUSHER-1 (B.F.)	Under Maintenance							
24.05.2018	CRUSHER-1 (B.F.)	0.38	325	21.31	7.43	26.20		0.017	
31.05.2018	CRUSHER-1 (B.F.)	0.38	324	20.72	7.24	22.90		0.014	
	June'2018								
07.06.2018	CRUSHER-1 (B.F.)	0.38	324	22.66	7.92	16.90	20.5	0.012	
12.06.2018	CRUSHER-1 (B.F.)	0.38	325	23.41	8.16	21.80		0.015	
19.06.2018	CRUSHER-1 (B.F.)	0.38	322	21.21	7.46	19.20		0.012	
26.06.2018	CRUSHER-1 (B.F.)	0.38	326	22.63	7.86	24.20		0.016	
	July'2018								
03-07-2018	Crusher (B.F.)	0.38	329	19.42	6.68	22.30	25.6	0.013	
10-07-2018	Crusher (B.F.)	0.38	320	19.70	6.97	27.00		0.016	
20-07-2018	Crusher (B.F.)	0.38	324	22.14	7.74	24.50		0.016	
24-07-2018	Crusher (B.F.)	0.38	322	21.21	7.46	28.70		0.019	
	August'2018								
06-08-2018	Crusher (B.F.)	0.38	325	20.53	7.15	19.70	21.4	0.012	
14-08-2018	Crusher (B.F.)	0.38	322	22.07	7.76	22.30		0.015	
21-08-2018	Crusher (B.F.)	0.38	330	19.75	6.78	20.10		0.012	
25-08-2018	Crusher (B.F.)	0.38	328	21.96	7.58	23.50		0.015	
	September'2018								
03.09.2018	Crusher (B.F.)	0.38	328	23.31	8.05	19.20	20.8	0.013	
10.09.2018	Crusher (B.F.)	0.38	326	21.23	7.37	17.10		0.011	
17.09.2018	Crusher (B.F.)	0.38	320	20.37	7.21	22.90		0.014	
28.09.2018	Crusher (B.F.)	0.38	325	21.85	7.61	23.80		0.016	

J.K. Cement WORKS, MANGROL (RAJ) (Unit-2)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
April' 2018 - September' 2018

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'18								
06.04.2018	KILN + RAW MILL (B.F.)	14.18	426	11.89	117.94	14.70	12.2	0.150	
13.04.2018	KILN + RAW MILL (B.F.)	14.18	420	13.30	133.81	9.60		0.111	
20.04.2018	KILN + RAW MILL (B.F.)	14.18	419	13.46	135.74	10.70		0.125	
27.04.2018	KILN + RAW MILL (B.F.)	14.18	424	12.99	129.46	13.80		0.154	
	May'18								
03.05.2018	KILN + RAW MILL (B.F.)	14.18	428.00	12.53	123.71	12.10	10.4	0.13	
10.05.2018	KILN + RAW MILL (B.F.)	14.18	430	13.20	129.72	9.40		0.105	
17.05.2018	KILN + RAW MILL (B.F.)	14.18	425	13.37	132.93	10.20		0.117	
24.05.2018	KILN + RAW MILL (B.F.)	14.18	426.00	13.51	134.01	9.80		0.113	
	June'18								
01.06.2018	KILN + RAW MILL (B.F.)	14.18	425	12.87	127.96	11.10	10.7	0.123	
08.06.2018	KILN + RAW MILL (B.F.)	14.18	441	13.50	129.36	10.10		0.113	
15.06.2018	KILN + RAW MILL (B.F.)	14.18	434.00	13.20	128.52	9.40		0.104	
22.06.2018	KILN + RAW MILL (B.F.)	14.18	437	13.02	125.90	12.00		0.131	
	July'18								
05-07-2018	KILN + RAW MILL (B.F.)	14.18	428	13.79	136.15	14.50	12.7	0.171	
12-07-2018	KILN + RAW MILL (B.F.)	14.18	435	13.09	127.16	12.20		0.134	
19-07-2018	KILN + RAW MILL (B.F.)	14.18	430	15.08	148.19	11.20		0.143	
26-07-2018	KILN + RAW MILL (B.F.)	14.18	432	14.50	141.83	13.00		0.159	
	August'18								
09.08.2018	KILN + RAW MILL (B.F.)	Under Maintenance							
16-08-2018	KILN + RAW MILL (B.F.)	14.18	430.00	13.91	136.69	16.30	14.4	0.193	
23-08-2018	KILN + RAW MILL (B.F.)	14.18	432	14.70	143.79	12.80		0.159	
30-08-2018	KILN + RAW MILL (B.F.)	14.18	428	14.71	145.23	14.20		0.178	
	September'18								
03.09.2018	KILN + RAW MILL (B.F.)	14.18	429	14.45	142.33	14.20	13.60	0.175	
10.09.2018	KILN + RAW MILL (B.F.)	14.18	435	14.17	137.65	15.70		0.187	
17.09.2018	KILN + RAW MILL (B.F.)	14.18	432	15.01	146.82	12.60		0.160	
24.09.2018	KILN + RAW MILL (B.F.)	14.18	436	14.48	140.34	12.00		0.146	
	April'18								
06.04.2018	CLINKER COOLER (ESP)	8.8	431	5.7	34.9	11.2	13.7	0.034	
13.04.2018	CLINKER COOLER (ESP)	8.8	425	6.4	39.7	14.6		0.050	
20.04.2018	CLINKER COOLER (ESP)	8.8	429	7.1	43.2	19.6		0.073	
27.04.2018	CLINKER COOLER (ESP)	8.8	427	5.9	36.3	9.4		0.029	
	May'18								
03.05.2018	CLINKER COOLER (ESP)	8.80	432.00	6.65	40.37	14.10	18.2	0.049	
10.05.2018	CLINKER COOLER (ESP)	8.80	435	6.92	41.72	22.40		0.081	
17.05.2018	CLINKER COOLER (ESP)	8.80	430	6.94	42.32	21.20		0.078	
24.05.2018	CLINKER COOLER (ESP)	8.80	433	7.20	43.61	15.10		0.057	
	June'18								
01.06.2018	CLINKER COOLER (ESP)	8.80	427	6.97	42.81	20.40	21.6	0.075	
08.06.2018	CLINKER COOLER (ESP)	8.80	437	7.11	42.67	22.30		0.082	
15.06.2018	CLINKER COOLER (ESP)	8.80	432.00	7.13	43.28	24.80		0.093	
22.06.2018	CLINKER COOLER (ESP)	8.80	435	6.92	41.72	18.80		0.068	
	July'18								
05-07-2018	CLINKER COOLER (ESP)	8.80	425	8.12	50.10	22.40	20.8	0.097	
12-07-2018	CLINKER COOLER (ESP)	8.80	428	7.63	46.75	19.40		0.078	
19-07-2018	CLINKER COOLER (ESP)	8.80	430	7.03	42.87	24.50		0.091	
26-07-2018	CLINKER COOLER (ESP)	8.80	421	7.95	49.52	16.90		0.072	

	July'18								
05-07-2018	CEMENT MILL (B.F.)	6.60	380	12.99	67.23	22.80	23.6	0.132	
12-07-2018	CEMENT MILL (B.F.)	6.60	375	13.83	72.54	26.90		0.169	
19-07-2018	CEMENT MILL (B.F.)	6.60	382	12.50	64.36	19.90		0.111	
26-07-2018	CEMENT MILL (B.F.)	6.60	372	13.51	71.43	24.70		0.152	
	August'18								
09-08-2018	CEMENT MILL (B.F.)	6.60	378	13.59	70.71	13.90	13.5	0.085	
14-08-2018	CEMENT MILL (B.F.)	6.60	382	13.19	67.91	18.20		0.107	
23-08-2018	CEMENT MILL (B.F.)	6.60	385	14.17	72.39	10.00		0.063	
30-08-2018	CEMENT MILL (B.F.)	6.60	379	13.77	71.46	11.80		0.073	
	September'18								
04.09.2018	CEMENT MILL (B.F.)	6.6	384	14.0	71.81	12.9	16.2	0.080	
11.09.2018	CEMENT MILL (B.F.)	6.6	378	13.56	70.56	20.4		0.124	
18.09.2018	CEMENT MILL (B.F.)	6.6	380	13.73	71.06	15.2		0.093	
24.09.2018	CEMENT MILL (B.F.)	6.60	376	13.79	72.13	16.20		0.101	
	April'18								
07.04.2018	CRUSHER BAG FILTER	1.23	325	10.41	11.70	24.60	20.2	0.025	
14.04.2018	CRUSHER BAG FILTER	1.23	319	10.85	12.43	18.20		0.020	
21.04.2018	CRUSHER BAG FILTER	1.23	322	12.07	13.69	15.20		0.018	
28.04.2018	CRUSHER BAG FILTER	1.23	320	11.16	12.74	22.70		0.025	
	May'18								
3.05.2018	CRUSHER BAG FILTER	1.23	323	10.37	11.73	21.90	17.4	0.022	
10.05.2018	CRUSHER BAG FILTER	1.23	325	10.95	12.31	12.90		0.014	
17.05.2018	CRUSHER BAG FILTER	1.23	324	12.10	13.64	14.40		0.017	
24.05.2018	CRUSHER BAG FILTER	1.23	320	11.16	12.74	20.50		0.023	
	June'18								
04.06.2018	CRUSHER BAG FILTER	1.23	327	10.88	12.16	13.9	14.1	0.015	
11.06.2018	CRUSHER BAG FILTER	1.23	326	10.97	12.29	10.1		0.011	
19.06.2018	CRUSHER BAG FILTER	1.23	329	11.73	13.03	14.50		0.016	
22.06.2018	CRUSHER BAG FILTER	1.23	324	11.28	12.72	18.00		0.020	
	July'18								
05-07-2018	CRUSHER BAG FILTER	1.23	320	10.63	12.14	15.60	18.2	0.016	
12-07-2018	CRUSHER BAG FILTER	1.23	318	11.48	13.19	21.00		0.024	
20-07-2018	CRUSHER BAG FILTER	1.23	321	11.07	12.60	16.90		0.018	
27-07-2018	CRUSHER BAG FILTER	1.23	317	10.42	12.01	19.20		0.020	
	August'18								
09-08-2018	CRUSHER BAG FILTER	Under Maintenance					20.4		
17-08-2018	CRUSHER BAG FILTER	1.23	320	11.81	13.48	19.2		0.022	
20-08-2018	CRUSHER BAG FILTER	1.23	315	10.97	12.72	22.1		0.024	
28-08-2018	CRUSHER BAG FILTER	1.23	324	11.54	13.01	19.9		0.022	
	September'18								
04.09.2018	CRUSHER BAG FILTER	1.23	326	11.18	12.53	14	16.8	0.015	
11.09.2018	CRUSHER BAG FILTER	1.23	322	11.72	13.3	15.7		0.018	
18.09.2018	CRUSHER BAG FILTER	1.23	324	11.28	12.72	17.00		0.019	
24.09.2018	CRUSHER BAG FILTER	1.23	320	11.46	13.08	20.4		0.023	
	April'18								
02.04.2018	PACKER -1 BAG FILTER	0.785	321	10.58	7.71	17.3	15.4	0.012	
09.04.2018	PACKER -1 BAG FILTER	0.785	325	11.48	8.26	13.7		0.010	
16.04.2018	PACKER -1 BAG FILTER	0.785	323	11.12	8.05	10.4		0.007	
23.04.2018	PACKER -1 BAG FILTER	0.785	319	10.65	7.81	20.3		0.014	
	May'18								
01.05.2018	PACKER -1 BAG FILTER	0.785	324	10.91	7.88	11.9	12.8	0.008	
11.05.2018	PACKER -1 BAG FILTER	0.785	322	11.42	8.3	13.9		0.010	
18.05.2018	PACKER -1 BAG FILTER	0.785	324	11.23	8.11	10		0.007	
25.05.2018	PACKER -1 BAG FILTER	0.785	320	10.79	7.89	15.5		0.011	

	May'18								
01.05.2018	PACKER -3 BAG FILTER	0.785	325	10.79	7.77	13.3	14.5	0.009	
11.05.2018	PACKER -3 BAG FILTER	0.785	322	11.55	8.4	15.4		0.011	
18.05.2018	PACKER -3 BAG FILTER	0.785	324	11.88	8.58	12		0.009	
25.05.2018	PACKER -3 BAG FILTER	0.785	320	11.26	8.23	17.4		0.012	
	June'18								
06.06.2018	PACKER -3 BAG FILTER	0.785	323	11.21	8.12	11.8	13.5	0.008	
13.06.2018	PACKER -3 BAG FILTER	0.785	326	11.52	8.27	14.8		0.011	
20.06.2018	PACKER -3 BAG FILTER	0.785	329	11.93	8.48	12.2		0.009	
29.06.2018	PACKER -3 BAG FILTER	0.785	324	11.69	8.44	15		0.011	
	July'18								
06-07-2018	PACKER -3 BAG FILTER	0.785	327	11.64	8.33	11.8	12.7	0.008	
13-07-2018	PACKER -3 BAG FILTER	0.785	324	11.12	8.03	15.4		0.011	
20-07-2018	PACKER -3 BAG FILTER	0.785	330	12.53	8.88	12.9		0.010	
27-07-2018	PACKER -3 BAG FILTER	0.785	325	11.85	8.53	10.6		0.008	
	August'18								
01-08-2018	PACKER -3 BAG FILTER	0.785	315	12.08	8.97	13.3	16.4	0.010	
08-08-2018	PACKER -3 BAG FILTER	0.785	318	11.38	8.37	19.6		0.014	
13-08-2018	PACKER -3 BAG FILTER	0.785	322	11.19	8.13	20.3		0.014	
22-08-2018	PACKER -3 BAG FILTER	0.785	318	12.3	9.05	12.3		0.010	
	September'18								
05.09.2018	PACKER -3 BAG FILTER	0.785	320	11.15	8.15	23.2	19.5	0.008	
12.09.2018	PACKER -3 BAG FILTER	0.785	324	11.66	8.42	18.1		0.011	
19.09.2018	PACKER -3 BAG FILTER	0.785	314	10.9	8.12	19.7		0.009	
27.09.2018	PACKER -3 BAG FILTER	0.785	322	12.26	8.91	17.1		0.011	
	April'18								
05.04.2018	PACKER -4 BAG FILTER	0.785	324	11.46	8.27	9.6	12.7	0.007	
11.04.2018	PACKER -4 BAG FILTER	0.785	321	10.58	7.71	16		0.011	
18.04.2018	PACKER -4 BAG FILTER	0.785	327	10.99	7.86	13.8		0.009	
25.04.2018	PACKER -4 BAG FILTER	0.785	323	12.12	8.78	11.4		0.009	
	May'18								
03.05.2018	PACKER -4 BAG FILTER	0.785	322	11.19	8.13	16.9	15.8	0.012	
11.05.2018	PACKER -4 BAG FILTER	0.785	325	11.4	8.21	19		0.013	
18.05.2018	PACKER -4 BAG FILTER	0.785	324	11.15	8.05	15.1		0.011	
25.05.2018	PACKER -4 BAG FILTER	0.785	326	11.85	8.5	12.3		0.009	
	June'18								
06.06.2018	PACKER -4 BAG FILTER	Under Maintenance							
13.06.2018	PACKER -4 BAG FILTER	0.785	326	11.62	8.34	17.7	14.8	0.013	
20.06.2018	PACKER -4 BAG FILTER	0.785	327	11.33	8.11	13.6		0.010	
28.06.2018	PACKER -4 BAG FILTER	0.785	325	11.4	8.21	13		0.009	
	July'18								
06-07-2018	PACKER -4 BAG FILTER	0.785	324	10.59	7.65	14.4	14.0	0.010	
13-07-2018	PACKER -4 BAG FILTER	0.785	325	11.09	7.98	19.3		0.013	
20-07-2018	PACKER -4 BAG FILTER	0.785	319	11.69	8.57	10.3		0.008	
27-07-2018	PACKER -4 BAG FILTER	0.785	321	10.86	7.91	11.8		0.008	
	August'18								
01-08-2018	PACKER -4 BAG FILTER	0.785	326	11.55	8.29	21.5	16.8	0.015	
07-08-2018	PACKER -4 BAG FILTER	0.785	322	10.88	7.9	17.7		0.012	
14-08-2018	PACKER -4 BAG FILTER	0.785	320	11.66	8.52	12.5		0.009	
22-08-2018	PACKER -4 BAG FILTER	0.785	324	10.78	7.78	15.3		0.010	
	September'18								
05.09.2018	PACKER -4 BAG FILTER	0.785	328	11.35	8.09	19.3	16.6	0.013	
12.09.2018	PACKER -4 BAG FILTER	0.785	324	11.65	8.41	20.9		0.015	
19.09.2018	PACKER -4 BAG FILTER	0.785	322	11.4	8.28	13.4		0.010	
27.09.2018	PACKER -4 BAG FILTER	0.785	326	11.08	7.95	12.6		0.009	

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' 2018 - September' 2018)

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR RAW MATERIAL GATE	NEAR PACKING PLANT GATE	Remarks
April' 2018						
1	SPM	348.7	372.0	414.3	391.0	
2	PM10	39.7	43.5	49.3	47.5	
3	SO2	8.7	10.5	12.5	11.8	
4	NOX	19.1	23.2	24.5	23.3	
5	CO	500.9	629.8	787.2	663.1	
May' 2018						
1	SPM	377.0	409.0	453.5	450.5	
2	PM10	47.0	54.9	58.1	57.3	
3	SO2	11.5	13.3	9.9	9.7	
4	NOX	22.3	24.5	22.3	23.0	
5	CO	663.1	672.7	734.7	715.6	
June' 2018						
1	SPM	378.0	411.5	447.2	463.8	
2	PM10	63.5	68.0	71.8	62.6	
3	SO2	11.1	14.3	9.4	9.3	
4	NOX	22.1	19.3	22.0	17.7	
5	CO	672.7	701.3	687.0	744.3	
July' 2018						
1	SPM	334.0	321.7	357.5	364.8	
2	PM10	40.4	42.0	51.6	57.5	
3	SO2	10.8	14.5	13.8	11.1	
4	NOX	19.5	20.0	21.2	19.7	
5	CO	644.1	772.9	672.7	687.0	
August' 2018						
1	SPM	334.2	321.9	356.8	366.6	
2	PM10	40.5	42.2	51.5	57.8	
3	SO2	10.8	14.5	13.8	12.0	
4	NOX	19.6	20.2	21.3	19.1	
5	CO	644.1	772.9	672.7	687.0	
September' 2018						
1	SPM	214.5	249.8	312.8	358.5	
2	PM10	32.9	37.9	48.5	51.2	
3	SO2	11.2	16.1	10.1	10.3	
4	NOX	19.3	20.0	17.6	18.9	
5	CO	687	658.4	701.3	1474.2	
Six monthly Average						
1	SPM	331.1	347.7	390.3	399.2	
2	PM10	44.0	48.1	55.1	55.6	
3	SO2	10.7	13.9	11.6	10.7	
4	NOX	20.3	21.2	21.5	20.3	
5	CO	635.3	701.3	709.3	828.5	

J.K. Cement Works, Mangrol (Unit-1)
Fugitive Emission Monitoring Report
April' 2018 - September' 2018

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-18	1758.5	2378.5	2237.0	2121.5
2	May-18	1838.2	2041.0	2909.8	1451.5
3	Jun-18	1784.2	2198.3	2581.9	1967.8
4	Jul-18	1607.6	1938.7	2319.4	1687.9
5	Aug-18	870.9	1510.4	1601.2	1084.7
6	Sep-18	1439.1	2255.5	2139.4	1451.9

J.K. Cement Works, Mangrol (Unit-2)
Fugitive Emission Monitoring Report
(April' 2018 -September' 2018)

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-18	1771.7	1842.3	1805.6	1694.2
2	May-18	1614.6	1631.7	1639.3	1811.4
3	Jun-18	1525.4	1512.2	1609.7	1677.4
4	Jul-18	1577.1	1740.8	1726.2	1614.1
5	Aug-18	1475.7	1488.1	1614.6	1430.6
6	Sep-18	1418.1	1513.9	1804.4	1463.5

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

Treated Domestic Effluent Analysis Report

April' 2018 - September' 2018

S.No.	PARAMETER	Standards	April-18	May-18	June-18	July-18	August-18	September-18
1	pH	Between 5.5 to 9.0	7.52	7.4	7.54	6.85	7.41	7.52
2	Chlorides as Cl	Not to exceed 1000 mg/l	120	122	116	88.5	81	96
3	Total Suspended solids	Not to exceed 100 mg/l	4.6	19	8	5	15	18
4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	14	22	18	14	2.1	6
5	Chemical Oxygen Demand	Not to exceed 250 mg/l	80	98	88	76	12	30
6	Oil & Grease	Not to exceed 10 mg/l	7	7	5	6	<1.4	<1.4
7	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	0.9	1.2	0.96	0.9	<0.1	<0.1
8	Sulphide (as S)	Not to exceed 2.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
9	Total Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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

Noise Monitoring Report

Month	Mangrol Plant FY 2018-19 (Up to September 2018) (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-18	67.8	58.9	68.6	61.4	70.4	58.8	71.3	61.3
May-18	69.1	59.5	70.6	61.1	69.8	59.1	70.3	62.3
Jun-18	67.9	58.5	69.9	60.4	69.2	58.8	68.8	61.6
Jul-18	67.4	57.8	70.1	61.1	68.7	57.8	71.1	60.8
Aug-18	68.0	58.2	69.1	60.2	67.4	56.3	70.0	61.3
Sep-18	69.2	59.8	69.8	61.5	68.4	57.5	69.4	60.4

J.K. Cement WORKS, Mangrol (RAJ)

10 MW WASTE HEAT RECOVERY PLANT

Outlet of Waste heat recovery plant

(April' 2018 - September' 2018)

MONTH/ PARAMETRS	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18
Total Suspended Solids (TSS) (Mg/l)	40	49	37	46	42	33
Oil & Grease (Mg/l)	<1.6	<1.2	<1.4	<1.4	<1.1	<1.4
Total Residual Chlorine (Mg/l)	NIL	NIL	<0.1	NIL	NIL	<0.1
Phosphate (Mg/l)	3.95	3.8	3.7	3.2	3.35	3.5
Free available chlorine (Mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH Value	7.65	7.45	7.48	7.56	7.7	7.52
Temperature	4°c Higher then the intake water	4°c Higher then the intake water	4°C higher than the intake water temperature	4°c Higher then the intake water	4°c Higher then the intake water	4°C higher than the intake water temperature
Copper as (Cu) (Mg/l)	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
Zinc (as Zn) (Mg/l)	<0.02	<0.03	<0.02	<0.02	<0.01	<0.02
Iron (Total) (Mg/l)	0.1	0.2	<0.05	0.1	0.2	<0.05
Chromium (total) (Mg/l)	0.003	0.006	<0.01	0.003	0.005	<0.01
BOD (Mg/l)	9.4	9.9	8.2	9.1	9.6	8
COD (Mg/l)	55	52	46	46	51	40

J.K. Cement WORKS, Mangrol (RAJ)

25 MW THERMAL POWER PLANT

Outlet of Power Plant

(April' 2018 - September' 2018)

PARAMETERS/MONTH	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18
Total Suspended Solids (TSS)	43	46	34	39	41	28
Oil & Grease	<1.4	<1.6	<1.4	<1.2	<1.0	<1.4
Total Residual Chlorine	NIL	NIL	<0.1	NIL	NIL	<0.1
Free available chlorine	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH Value	7.40	7.60	7.54	7.45	7.60	7.50
Temperature	4oc higher than the intake water temperature	4oc higher than the intake water temperature	4°C higher than the intake water temperature	4oc higher than the intake water temperature	4oc higher than the intake water temperature	4°C higher than the intake water temperature
Copper as (Cu)	<0.03	<0.02	<0.02	<0.01	<0.02	<0.02
Zinc (as Zn)	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Iron (Total)	0.3	0.2	<0.05	0.2	0.1	<0.05
Chromium (total)	0.006	0.003	<0.01	0.006	0.004	<0.01
BOD	9.7	10.3	8	9.2	8.9	10
COD	53	57	49	53	47	44
Phosphate	4.05	3.9	3.3	3.6	3.75	3.3

J.K. Cement WORKS, Mangrol (RAJ)

25 MW THERMAL POWER PLANT

Stack monitoring results (April 2018 - September 2018)

Location/Month	SPM (Mg/Nm3)					
	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
Stack attached with Boiler	15.0	13.0	12.2	20.0	17.0	23.3
Stack attached with Coal Crusher	11.0	10.0	13.3	14.0	12.0	16.2

J.K. Cement WORKS, MANGROL (RAJ)
AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON
FOR UNIT-1, UNIT-2, 25 MW CPP & 10 MW WHR
(ALL VALUES IN MICROGRAMS / CUBIC METER)
(April' 2018 - September' 2018)

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR RAW MATERIAL GATE	NEAR PACKING PLANT GATE	Remarks
April' 2018						
1	SPM	348.7	372.0	414.3	391.0	
2	PM10	39.7	43.5	49.3	47.5	
3	SO2	8.7	10.5	12.5	11.8	
4	NOX	19.1	23.2	24.5	23.3	
5	CO	500.9	629.8	787.2	663.1	
May' 2018						
1	SPM	377.0	409.0	453.5	450.5	
2	PM10	47.0	54.9	58.1	57.3	
3	SO2	11.5	13.3	9.9	9.7	
4	NOX	22.3	24.5	22.3	23.0	
5	CO	663.1	672.7	734.7	715.6	
June' 2018						
1	SPM	378.0	411.5	447.2	463.8	
2	PM10	63.5	68.0	71.8	62.6	
3	SO2	11.1	14.3	9.4	9.3	
4	NOX	22.1	19.3	22.0	17.7	
5	CO	672.7	701.3	687.0	744.3	
July' 2018						
1	SPM	334.0	321.7	357.5	364.8	
2	PM10	40.4	42.0	51.6	57.5	
3	SO2	10.8	14.5	13.8	11.1	
4	NOX	19.5	20.0	21.2	19.7	
5	CO	644.1	772.9	672.7	687.0	
August' 2018						
1	SPM	334.2	321.9	356.8	366.6	
2	PM10	40.5	42.2	51.5	57.8	
3	SO2	10.8	14.5	13.8	12.0	
4	NOX	19.6	20.2	21.3	19.1	
5	CO	644.1	772.9	672.7	687.0	
September' 2018						
1	SPM	214.5	249.8	312.8	358.5	
2	PM10	32.9	37.9	48.5	51.2	
3	SO2	11.2	16.1	10.1	10.3	
4	NOX	19.3	20.0	17.6	18.9	
5	CO	687	658.4	701.3	1474.2	
Six monthly Average						
1	SPM	331.1	347.7	390.3	399.2	
2	PM10	44.0	48.1	55.1	55.6	
3	SO2	10.7	13.9	11.6	10.7	
4	NOX	20.3	21.2	21.5	20.3	
5	CO	635.3	701.3	709.3	828.5	

J.K. Cement WORKS, MANGROL (RAJ)
Fugitive Emission Monitoring Report
(April 2018 - September 2018)
(ALL VALUES IN MICROGRAMS / CUBIC METER)

Month/Year	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18
NEAR COAL YARD OF 25 MW CPP	1862.7	1466.9	1440.4	1708.7	1500.7	1417.4

J.K. Cement WORKS, MANGROL (RAJ)

Noise Monitoring Report

(October 2017 - March 2018)

(ALL VALUES IN dB)

Month	25 MW CPP		10 MW WHR	
	Day	Night	Day	Night
Apr-18	71.4	61.3	68.6	58.9
May-18	70.9	61.6	68.2	60.3
Jun-18	70.2	60.9	67.6	59.4
Jul-18	69.8	61.1	68.9	58.7
Aug-18	68.5	60.5	67.8	57.8
Sep-18	69.0	61.0	68.0	58.0

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/2018-19/971
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01694
Sample Description : Stack Emission
Date & Time of Sampling: 24.08.2018 at 09.00 a.m
Sampling Location : Kiln & Raw mill stack (Line – 1)

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

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)	: 157	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 16.0	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 10.2	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 780	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm^3)	: 16.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag House	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

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/2018-19/972
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01695
Sample Description : Stack Emission
Date & Time of Sampling: 25.08.2018 at 09.10 a.m
Sampling Location : Kiln & Raw mill stack (Line – 2)

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

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)	: 166	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 16.8	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 9.2	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 795	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm^3)	: 13.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag House	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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/2018-19/959
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01682
Sample Description : Stack Emission
Date & Time of Sampling: 24.08.2018 at 02.30 p.m
Sampling Location : Cement Mill 2 (Line – 1)

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

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)	: 96	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 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

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/2018-19/960
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01683
Sample Description : Stack Emission
Date & Time of Sampling: 25.08.2018 at 02.30 p.m
Sampling Location : Cement Mill 3 (Line – 2)

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

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)	: 98	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 13.6	EPA Part 2
4.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/2018-19/961
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01684
Sample Description : Stack Emission
Date & Time of Sampling: 24.08.2018 at 04.0 p.m
Sampling Location : Clinker Cooler (Line – 1)

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

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)	: 122	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.2	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 28.0	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/2018-19/962
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01685
Sample Description : Stack Emission
Date & Time of Sampling: 25.08.2018 at 04.00 p.m
Sampling Location : Clinker Cooler (Line – 2)

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

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)	: 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

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/2018-19/963
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01686
Sample Description : Stack Emission
Date & Time of Sampling: 24.08.2018 at 11.00 A.M
Sampling Location : Coal Mill (Line – I)

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

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)	: 71	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 21.6	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 11.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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

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

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/964
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01687
Sample Description : Stack Emission
Date & Time of Sampling: 25.08.2018 at 11.00 A.M
Sampling Location : Coal Mill (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Coal mill	
2.Emission due to	: Grinding of coal	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 53 m	
2.Diameter of the Stack at sampling point	: 1.6 m	
3.Area of Stack	: 2.01 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Temperature of emission (°C)	: 68	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 20.0	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

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/2018-19/965
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01688
Sample Description : Stack Emission
Date & Time of Sampling: 25.08.2018 at 01.00 p.m
Sampling Location : Limestone Crusher (Line - 1)

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

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)	: 20.6	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

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/2018-19/966
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01689
Sample Description : Stack Emission
Date & Time of Sampling: 25.08.2018 at 01.00p.m
Sampling Location : Limestone Crusher (Line - 2)

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

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 (^{0}C)	: 31	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 9.2	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

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/2018-19/967
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01690
Sample Description : Stack Emission
Date & Time of Sampling: 27.08.2018 at 10.00 a.m
Sampling Location : Packer 1 (Line – 2)

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

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)	: 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

MITRA S.K. PVT. LTD.

Authorised Signatory

Mitra S.K. Private Limited

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

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

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/968
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01691
Sample Description : Stack Emission
Date & Time of Sampling: 27.08.2018 at 12.00 p.m
Sampling Location : Packer 2 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Packer 2	
2.Emission due to	: NA	
3.Material of construction of Stack	: MS	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 30.0 m	
2.Diameter of the Stack at sampling point	: 1.0 m	
3.Area of Stack	: 0.7857 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Concentration of Particulate Matters (mg/Nm^3)	: 8.0	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/2018-19/969
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01692
Sample Description : Stack Emission
Date & Time of Sampling: 27.08.2018 at 02.00 p.m
Sampling Location : Packer 3 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Packer 3	
2.Emission due to	: NA	
3.Material of construction of Stack	: MS	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1.Height of the stack from ground level	: 30.0 m	
2.Diameter of the Stack at sampling point	: 1.0 m	
3.Area of Stack	: 0.7857 m^2	
C. Results of sampling & analysis of gaseous emission	**Result**	**Method**
1.Concentration of Particulate Matters (mg/Nm^3)	:10.0	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/2018-19/970
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01693
Sample Description : Stack Emission
Date & Time of Sampling: 27.08.2018 at 04.00 p.m
Sampling Location : Packer 4 (Line – 2)

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

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)	: 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

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/2018-19/1136
Date : 28.09.2018
Sample No. : MSKGL/ED/2018-19/09/01555
Sample Description : Flue Gas Monitoring
Sampling Location :25MW Thermal Power Plant
Date & Time of Sampling : 12.09.2018 at 10.00 A.M

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

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	: 4.122 m	
3.Height of the sampling point from GL	: 38.10 m	
4.Area of Stack	: 13.34 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)	: 122	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 8.2	EPA Part 2
4.Concentration of Oxygen (% v/v)	: 6.6	IS 13270:1992,Reaf:2014
5.Conc. of Particulate Matters (mg/Nm^3) at 6% O_2 on dry basis	: 28.0	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

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/2018-19/1135
Date : 28.09.2018
Sample No. : MSKGL/ED/2018-19/09/01554
Sample Description : Flue Gas Monitoring
Sampling Location : Coal crusher Plant
Date & Time of Sampling : 12.09.2018 at 11.30 A.M

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

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)	: 54	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 10.4	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 16.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	
F. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

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/2018-19/1131
Date : 28.09.2018
Sample No. : MSKGL/ED/2018-19/09/01552
Sample Description : Treated Effluent Water
Sample Location : 25 MW TPP
Date of Collection : 12.09.2018

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27^0 C)	---	6.5 to 8.5	7.50
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	<0.05
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	^{0} C	Shall not exceed 5^0 C above the receiving water temperature	4^0 C higher than the intake water temperature
11.	Phosphate (as PO_4)	mg/l	5.0	3.30
12.	Chemical Oxygen Demand as COD	mg/l	250.0	44.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	10.0
14.	Chlorides (as Cl)	mg/l	1000.0	106.0
15.	Sulphate (as SO_4)	mg/l	1000.0	86.0

Report Prepared by :

For Mitra S.K. Private Limited

MITRA S.K. PVT. LTD.

* Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

TEST REPORT

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

Report No. : MSK/UDR/2018-19/1130
Date : 28.09.2018
Sample No. : MSKGL/ED/2018-19/09/01551
Sample Description : Treated Effluent Water
Sample Location : 10 MW WHR
Date of Collection : 12.09.2018

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27^0 C)	---	6.5 to 8.5	7.52
2.	Total Suspended solids (TSS)	mg/l	100	33.0
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	<0.05
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	^{0} C	Shall not exceed 5^0 C above the receiving water temperature	4^0 C higher than the intake water temperature
11.	Phosphate (as PO_4)	mg/l	5.0	3.50
12.	Chemical Oxygen Demand as COD	mg/l	250.0	40.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	8.0
14.	Chlorides (as Cl)	mg/l	1000.0	98.0
15.	Sulphate (as SO_4)	mg/l	1000.0	74.0

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

TESTING • INSPECTION

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/952
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01657 & 01763
Sample Description : Ambient Air
Sampling Location : Near Raw Material Gate
Date of Sampling : 24/25.08.2018

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

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	87	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	36	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	6.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	21.7	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.24	IS 5182 :(Part-10) :1999
6	Ozone (O3) in $\mu g/m^3$	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in $\mu g/m^3$	400	18.4	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in $\mu g/m^3$	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in $\mu g/m^3$	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

For 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

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/951
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01656 & 01762
Sample Description : Ambient Air
Sampling Location : Near Packing Plant Gate
Date of Sampling : 24/25.08.2018

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

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	74	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	32	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	5.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	23.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.22	IS 5182 :(Part-10) :1999
6	Ozone (O3) in $\mu g/m^3$	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in $\mu g/m^3$	400	19.4	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in $\mu g/m^3$	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in $\mu g/m^3$	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

For 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

TESTING • INSPECTION

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/950
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01655 & 01761
Sample Description : Ambient Air
Sampling Location : Near Thermal Power Plant
Date of Sampling : 24/25.08.2018

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

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	81	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	34	USEPA CFR-40,Part-50, Appendix-I.
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	6.1	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	22.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.33	IS 5182 :(Part-10) :1999
6	Ozone (O3) in $\mu g/m^3$	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in $\mu g/m^3$	400	20.4	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in $\mu g/m^3$	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in $\mu g/m^3$	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

For Mitra S. K. Pvt. Ltd.

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/949
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01654 & 01760
Sample Description : Ambient Air
Sampling Location : Near Time Office
Date of Sampling : 24/25.08.2018

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

SL. N0.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	70	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	30	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	5.5	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	22.6	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.28	IS 5182 :(Part-10) :1999
6	Ozone (O3) in $\mu g/m^3$	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in $\mu g/m^3$	400	22.0	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in $\mu g/m^3$	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in $\mu g/m^3$	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

For Mitra S. K. Pvt. Ltd.

Authorised Signatory

Mitra S.K. Private Limited

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

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

MSK
TESTING • INSPECTION

TEST REPORT

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

Report No. : MSK/UDR/2018-19/955
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/01677 to 1680
Sample Description : Noise Monitoring (Mangrol Plant)

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

ANALYSIS RESULT

Sl. No.	Sampling Date	Sampling Location	Results Leq dB(A)	
			Day Time	Night Time
1.	24/25.08.2018	Near Packing Plant Gate	64.7	49.6
2.		Near Time Office	53.5	45.4
3.		Near Power Plant	69.4	55.3
4.		Near Raw Material gate	68.0	51.8
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70

Report Prepared by :

For Mitra S.K. Private Limited

MITRA S.K. PVT. LTD.

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

TEST REPORT

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

Report No. : MSK/UDR/2018-19/786
Date : 30.07.2018
Sample No. : MSKGL/ED/2018-19/07/00870
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 11.07.2018

Reference No.& Date : 4600048788 , dtd- 25.04.2018

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27^0 C)	---	5.5 to 9.0	6.85
2.	Chloride as Cl	mg/l	1000	88.5
3.	Total Suspended solids	mg/l	100	5.0
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	14.0
5.	Chemical Oxygen Demand	mg/l	250	76.0
6.	Oil & Grease	mg/l	10	6.0
7.	Ammonical Nitrogen (as N)	mg/l	50	0.90
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

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/2018-19/902
Date : 31.08.2018
Sample No. : MSKGL/ED/2018-19/08/00615
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 13.08.2018

Reference No.& Date : 4600048788 , dtd- 25.04.2018

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	7.41
2.	Chloride as Cl	mg/l	1000	81.0
3.	Total Suspended solids	mg/l	100	15.0
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	2.1
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

TESTING • INSPECTION

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

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

TEST REPORT

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

Report No. : MSK/UDR/2018-19/1147
Date : 28.09.2018
Sample No. : MSKGL/ED/2018-19/09/00812
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 17.09.2018

Reference No.& Date : 4600048788 , dtd- 25.04.2018

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25^0 C)	---	5.5 to 9.0	7.52
2.	Chloride as Cl	mg/l	1000	96.0
3.	Total Suspended solids	mg/l	100	18.0
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	6.0
5.	Chemical Oxygen Demand	mg/l	250	30.0
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

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

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/401
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01443
Sample Description : Ambient Air
Sampling Location : Near Time Office
Date of Sampling : 13/14.06.2018

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

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	76	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	30	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	5.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	23.4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.32	IS 5182 :(Part-10) :1999
6	Ozone (O3) in $\mu g/m^3$	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in $\mu g/m^3$	400	21.2	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in $\mu g/m^3$	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in $\mu g/m^3$	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004

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

Report prepared by:

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/402
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01443
Sample Description : Ambient Air
Sampling Location : Near Thermal Power Plant
Date of Sampling : 13/14.06.2018

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

Sl. No.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in µg/m^3	100	86	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in µg/m^3	60	36	USEPA CFR-40,Part-50, Appendix-I.
3	Sulphur dioxide(SO2) in µg/m^3	80	5.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m^3	80	20.7	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.38	IS 5182 :(Part-10) :1999
6	Ozone (O3) in µg/m^3	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in µg/m^3	400	22.3	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in µg/m^3	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	< 1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in µg/m^3	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004

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

Report prepared by:

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/403
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01445
Sample Description : Ambient Air
Sampling Location : Near Raw Material Gate
Date of Sampling : 13/14.06.2018

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

Sl. No.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM_{10}) in $\mu g/m^3$	100	84	IS: 5182:(Part-23)-2006
2	Particulate matter($PM_{2.5}$) in $\mu g/m^3$	60	32	USEPA CFR-40,Part-50, Appendix-L
3	Sulphur dioxide(SO2) in $\mu g/m^3$	80	5	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in $\mu g/m^3$	80	19.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.21	IS 5182 :(Part-10) :1999
6	Ozone (O3) in $\mu g/m^3$	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in $\mu g/m^3$	400	17.2	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in $\mu g/m^3$	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in $\mu g/m^3$	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004

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

Report prepared by:

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

Name & Address of the Customer :

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

Report No. : MSK/EDR/2018-19/404
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01446
Sample Description : Ambient Air
Sampling Location : Near Packing Plant Gate
Date of Sampling : 13/14.06.2018

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

SL. NO.	Pollutants	Limit	Result	Method of Test Refference
1	Particulate matter (PM $_{10}$) in µg/m^3	100	78	IS: 5182:(Part-23)-2006
2	Particulate matter(PM $_{2.5}$) in µg/m^3	60	36	USEPA CFR-40,Part-50, Appendix-I.
3	Sulphur dioxide(SO2) in µg/m^3	80	5.5	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO2) in µg/m^3	80	22.6	IS; 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.27	IS 5182 :(Part-10) :1999
6	Ozone (O3) in µg/m^3	180	<19.62	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-411)
7	Ammonia (NH3) in µg/m^3	400	18.0	Method of Air sampling, 3rd Edn. By James P. Lodge (Method-401)
8	Lead (Pb) in µg/m^3	1	<0.02	EPA-IO 3.2
9	Nickel (Ni) in ng/m^3	20	<4.0	EPA-IO 3.2
10	Arsenic (As) in ng/m^3	6	<1.0	APHA 22nd - 3114 C
11	Benzene (C6H6) in µg/m^3	5	<2.08	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.4	IS 5182 : Part. 12 : 2004.

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

Report prepared by:

For 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/2018-19/414
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01462 to 01465
Sample Description : Noise Monitoring

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

ANALYSIS RESULT

Sl. No.	Sampling Date	Sampling Location	Results Leq dB(A)	
			Day Time	Night Time
1.	13/14.06.2018	Near Packing Plant Gate	68.6	52.8
2.		Near Time Office	57.4	47.2
3.		Near Thermal Power Plant	70.2	57.3
4.		Near Raw Material gate	69.8	53.9
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

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/2018-19/441
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01495
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2018 at 10.00 a.m
Sampling Location : Kiln & Raw mill stack (Line 1)

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

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)	: 18.6	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 9.4	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 638	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm^3)	: 14.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag House	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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/2018-19/442
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01496
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2018 at 10.00 a.m
Sampling Location : Kiln & Raw mill stack (Line – 2)

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

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)	: 170	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 17.2	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm^3)	: 8.8	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm^3)	: 624	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

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/2018-19/416
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01470
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2018 at 4.00 p.m
Sampling Location : Coal Mill (Line – 1)

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

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)	: 22.4	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

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/2018-19/417
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01471
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2018 at 4.00 p.m
Sampling Location : Coal Mill (Line – 2)

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

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)	: 66	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 20.8	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 16.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/418
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01472
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2018 at 02.0 p.m
Sampling Location : Clinker Cooler (Line – 1)

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

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 (^{0}C)	: 124	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 7.8	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm^3)	: 18.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Electrostatic Precipitator	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

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/2018-19/419
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01473
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2018 at 02.0 p.m
Sampling Location : Clinker Cooler (Line – 2)

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

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)	: 8.4	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

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/2018-19/420
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01474
Sample Description : Stack Emission
Date & Time of Sampling: 13.06.2018 at 012.00 p.m
Sampling Location : Cement Mill 2 (Line – 1)

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

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)	: 100	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 10.2	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

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/2018-19/421
Date : 30.06.2018
Sample No. : MSKGL/ED 2018-19/06/01475
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2018 at 012.00 p.m
Sampling Location : Cement Mill 3 (Line – 2)

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

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)	: 98	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 11.0	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. Private Limited

TESTING • INSPECTION

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

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

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/422
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01476
Sample Description : Stack Emission
Date & Time of Sampling: 16.06.2018 at 10.00 a.m
Sampling Location : Packer 1 (Line – 2)

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

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)	: 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/2018-19/423
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01477
Sample Description : Stack Emission
Date & Time of Sampling: 16.06.2018 at 12.00 p.m
Sampling Location : Packer 2 (Line – 2)

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

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)	: 7.0	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/2018-19/424
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01478
Sample Description : Stack Emission
Date & Time of Sampling: 16.06.2018 at 02.00 p.m
Sampling Location : Packer 3 (Line – 2)

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

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)	:11.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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

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

MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2018-19/425
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01479
Sample Description : Stack Emission
Date & Time of Sampling: 16.06.2018 at 04.00 p.m
Sampling Location : Packer 4 (Line – 2)

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

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

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/2018-19/426
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01480
Sample Description : Stack Emission
Date & Time of Sampling: 15.06.2018 at 5.00 p.m
Sampling Location : Limestone Crusher (Line - 1)

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

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)	: 32	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 10.2	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

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/2018-19/427
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01481
Sample Description : Stack Emission
Date & Time of Sampling: 16.06.2018 at 05.p.m
Sampling Location : Limestone Crusher (Line - 2)

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

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	: 1.48 m	
3.Area of Stack	: 1.72 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)	: 9.6	EPA Part 2
4.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

MITRA S.K. PVT. LTD.

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

TEST REPORT

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

Report No. : MSK/UDR/2018-19/438
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01492
Sample Description : Flue Gas Monitoring
Sampling Location :25MW Thermal Power Plant
Date & Time of Sampling : 18.06.2018 at 11.00 A.M

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

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	: 4.122 m	
3.Height of the sampling point from GL	: 38.10 m	
4.Area of Stack	: 13.34 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)	: 120	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 7.8	EPA Part 2
4.Quantity of gas flow (Nm^3/hr.)	: 178668	EPA Part 2
5.Concentration of Carbondioxide (% v/v)	: 10.8	IS 13270:1992,Reaf:2014
6.Concentration of Particulate Matters (mg/Nm^3)	: 24.0 at 12% CO_2	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 Center (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037

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

MSK
TESTING • INSPECTION

TEST REPORT

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

Report No. : MSK/UDR/2018-19/439
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01493
Sample Description : Flue Gas Monitoring
Sampling Location : Coal crusher Plant
Date & Time of Sampling : 18.06.2018 at 12.30 P.M

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

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)	: 59	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 11.8	EPA Part 2
4.Quantity of gas flow (Nm^3/hr.)	: 18266	EPA Part 2
5.Concentration of Particulate Matters (mg/Nm^3)	: 19.0	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

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/2018-19/450
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01504
Sample Description : Effluent Water
Sample Location : 25 MW TPP outlet
Date of Collection : 18.06.2018

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27^0 C)	---	6.5 to 8.5	7.54
2.	Total Suspended solids (TSS)	mg/l	100	34.0
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	<0.05
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	^{0}C	Shall not exceed 5^0 C above the receiving water temperature	4^0 C higher than the intake water temperature
11.	Phosphate (as PO_4)	mg/l	5.0	3.30
12.	Chemical Oxygen Demand as COD	mg/l	250.0	49.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	8.0

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/2018-19/451
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01505
Sample Description : Effluent Water
Sample Location : 10 MW WHR Effluent Water
Date of Collection : 18.06.2018

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27^0 C)	---	6.5 to 8.5	7.48
2.	Total Suspended solids (TSS)	mg/l	100	37.0
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	<0.05
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	^{0} C	Shall not exceed 5^0 C above the receiving water temperature	4^0 C higher than the intake water temperature
11.	Phosphate (as PO_4)	mg/l	5.0	3.70
12.	Chemical Oxygen Demand as COD	mg/l	250.0	46.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	8.2

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

TEST REPORT

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

Report No. : MSK/UDR/2018-19/27
Date : 17.04.2018
Sample No. : MSKGL/ED/2018-19/04/00436
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 07.04.2018

Reference No.& Date : 4600048788 , dtd- 25.04.2018

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27^0 C)	---	5.5 to 9.0	7.52
2.	Chloride as Cl	mg/l	1000	120.0
3.	Total Suspended solids	mg/l	100	4.6
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	14.0
5.	Chemical Oxygen Demand	mg/l	250	80.0
6.	Oil & Grease	mg/l	10	7.0
7.	Ammonical Nitrogen (as N)	mg/l	50	0.90
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

TESTING • INSPECTION

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

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

TEST REPORT

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

Report No. : MSK/UDR/2018-19/110
Date : 30.05.2018
Sample No. : MSKGL/ED/2018-19/05/00916
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 18.05.2018

Reference No.& Date : 4600048788 , dtd- 25.04.2018

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27^0 C)	---	5.5 to 9.0	7.40
2.	Chloride as Cl	mg/l	1000	122.0
3.	Total Suspended solids	mg/l	100	19.0
4.	Biological Oxidation Demand (3 days at 27^0 C)	mg/l	30	22.0
5.	Chemical Oxygen Demand	mg/l	250	98.0
6.	Oil & Grease	mg/l	10	7.0
7.	Ammonical Nitrogen (as N)	mg/l	50	1.20
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

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/2018-19/348
Date : 30.06.2018
Sample No. : MSKGL/ED/2018-19/06/01328
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 19.06.2018

Reference No.& Date : 4600048788 , dtd- 25.04.2018

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27° C)	---	5.5 to 9.0	7.54
2.	Chloride as Cl	mg/l	1000	116.0
3.	Total Suspended solids	mg/l	100	8.0
4.	Biological Oxidation Demand (3 days at 27° C)	mg/l	30	18.0
5.	Chemical Oxygen Demand	mg/l	250	88.0
6.	Oil & Grease	mg/l	10	5.0
7.	Ammonical Nitrogen (as N)	mg/l	50	0.96
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