

JK Cement LTD.

CIN : L17229UP1994PLC017199

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

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

Our Ref. No.: NBH/PC/11B/C11/ *no96*

Regd. AD

Date: 26.11.2019

To,
The Joint Director, (I)
Indira Paryavaran Bhavan,
JOR Bagh Road,
Near JOR bagh Metro station
New Delhi 110003

Sub: Environmental Clearance Compliance report for Expansion of Integrated Cement Plant (Clinker 2.8 MTPA to 5.0 MTPA) Cement 3.6 MTPA to 6.5 MTPA) CPP (22.0 MW to 47 MW) & WHRB (13.2 MW to 15.0 MW) M/s J.K. Cement Works, Nimbahera , located at Kailash Nagar Tehsil : Nimbahera , District-Chittorgarh, Rajasthan.

Ref.: EC letter no. - J-11011/243/2016-1A (II) (I) dated 23.07.2018

Dear Sir,

With reference to above stated Environment Clearance (EC) accorded for our Nimbahera plant (Clinker 2.8 MTPA to 5.0 MTPA) Cement 3.6 MTPA to 6.5 MTPA) CPP (22.0 MW to 47 MW) & WHRB (13.2 MW to 15.0 MW) at Nimbahera, distt. Chittorgarh (Raj.) Please find attached herewith six monthly compliance for the period from **April' 2019 to Sept' 2019. As per MoEF & CC notification no. S.O. 5845 (E) 26.11.2018 the same soft copy has been send to email id. roc.z.lko-mef@nic.in, moef@nic.in, m env@rediffmail.com, ccb.cpcb@nic.in, member-secretary@rpcb.nic.in, cpcb.bhopal@gmail.com** for your kind reference and record please. We trust you will find the same in order.

Thanking you,

Yours Faithfully
For J.K. Cement Works, Nimbahera

S.K. Acharya
S.K. Acharya

Head (Environment & Power management)

S.K. Acharya
Encl: a/a

Copy to:

- 1.The Director**,Ministry of Environment, Forests & Climate Change, Regional office (Central Region), Kendriya Bhawan, 5th Floor, Sector 'H' , ALIGANJ, **LUCKNOW- 226020 (U.P.)**
- 2.The Chairman**, Central Pollution Control Board ,Parivesh Bhawan, CBD-CUM office complex, East Arjun Nagar, Maharaja Surajmal Marg, Vishwas Nagar Extension, Viswas nagar Shahdara- Behind Karkarduma high court New Delhi 11032
- 3. Member Secretary**, Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, **JAIPUR - 302004 (RAJASTHAN)**

Corporate & Registered Office : Kamla Tower, Kanpur-208001, (U. P.) INDIA
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J. K. Cement Works, Nimbahera
J. K. Cement Works Mangrol
J. K. Cement Works, Gotan
J. K. Cement Works, Jharli

J. K. Power, Bamania
J. K. Cement Works, Muddapur
J. K. White Cement Works, Gotan
J. K. White, Katni





JK Cement LTD.

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

J-11011/243/2016-IA. II (I) Dated 23/07/2018

Period: Apr-19 to Sept-19

**For
Expansion of Integrated Cement Project:
Clinker (2.80 MMTPA to 5.00 MMTPA) and Cement (3.60 MMTPA to
6.50 MMTPA), Captive Power Plant from 22 MW to 47 MW, and
WHRB from 13.2 MW to 15 MW**

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

**Submitted by:
M/s J.K.CEMENT WORKS, NIMBAHERA,
Kailash Nagar, Tehsil: Nimbahera, District: Chittorgarh (Raj)**



**JK SUPER
CEMENT
BUILD SAFE**

Validity of the statutory approvals obtained in compliance of EC:

- Environmental Clearance has been issued vide letter no -. J-11011/243/2016-IA-II(I)] dated 23rd July ' 2018.
- CTO for existing production of Cement (3.6MMTPA) and Clinker (2.80 MMTPA) was issued vide letter no. F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 - 2011/ 8039-8041 dated 20.12.2017 valid up to 31.05.2022.
- Amendment in CTO issued on 25.01.2018 & 22.10.2018 to cement plant.
- CTO for 22 MW Captive Thermal Power Plant vide letter no. F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 - 2011/ 1721-1723 dated 29/07/2019 which is valid upto 31.03.2024.
- CTO for 13.20 MW Waste Heat Recovery Plant vide letter no. F (Tech)/ Chittorgarh (Nimbahera)/ 5(1)/ 2010 - 2011/ 4732-4734 dated 29.10.2018 which is valid upto 31.07.2023.

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K.CEMENT WORKS, NIMBAHERA
(Period April 2019 to September 2019) Dated 26.11.2019

S. No.	Condition	Status	Remarks/Action plan												
	(A) Specific Conditions														
1	The project proponent shall implement the conservation plan for schedule-I species (Pea fowl and Leopard) in consultation with the local forest department with the fund provisions of Rs. 82.80 Lakhs in addition to the existing fund provision of 8.90 Lakhs.	• The detailed action plan for conservation of schedule-I species (Pea fowl and Leopard) was prepared in consultation with local DFO and Rs.57.0 Lacs budgetary provision for Leopard is estimated a period of 10 Years. • The proposed budgetary provision for pea fowl is kept Rs. 25.8 Lacs for 10 Years • The Existing budgetary provision for conservation of the Pea Fowl was 8.90 Lacs and following activities has been undertaken:<table><tr><td>1</td><td>Maintenance and watering of existing tanks in core zone</td><td>1,50,000</td></tr><tr><td>2</td><td>Arrangements of food for 250 peacocks in core zone@1000 per day</td><td>3,60,000</td></tr><tr><td>3</td><td>Man power for cleaning and safety of peacocks in core zone @Rs.210/- per man for five persons</td><td>3,80,000</td></tr><tr><td></td><td>Total</td><td>Rs. 8,90,000</td></tr></table>	1	Maintenance and watering of existing tanks in core zone	1,50,000	2	Arrangements of food for 250 peacocks in core zone@1000 per day	3,60,000	3	Man power for cleaning and safety of peacocks in core zone @Rs.210/- per man for five persons	3,80,000		Total	Rs. 8,90,000	The action plan for conservation of pea fowl and Leopard with fund provision of 82.80 lakhs has been submitted to PCCF Jaipur. The approval of the conservation plan is still awaited. Details attached as Annexure-1
1	Maintenance and watering of existing tanks in core zone	1,50,000													
2	Arrangements of food for 250 peacocks in core zone@1000 per day	3,60,000													
3	Man power for cleaning and safety of peacocks in core zone @Rs.210/- per man for five persons	3,80,000													
	Total	Rs. 8,90,000													
2	The project proponent shall adopt the slip power recovery system for proposed line no.4 equipped with Bag House Fan (Raw Mill, Kiln PH Fan-1, Separator Fan for Cement Mill Polycom, Separator fan for Raw Mill Polycom).	• Slip Power Recovery System is adopted at Kiln & Raw mill fans for line-3 in existing unit. • The adoption of slip power recovery system or variable voltage & variable frequencies drives (VVVFD) for proposed line no.4 will be equipped with Bag House Fan (Raw Mill Fan and Mill), Kiln PH Fan, Coal mill, Separator Fan for Cement Mill Polycom (HRP) with operating speed range will be 65-95% in view of saving in KW (KWH) about 15-20% of the equipment operating load.	It is envisaged that the modernisation in plant will be operational within 8 months as speculated. The slip power recovery system or variable voltage and variable frequencies drives (VVVFD) will be adopted in future plant modernisation and proposed Line-4 project.												

The project proponent shall utilize the alternate fuels to the maximum extent possible

The following alternate fuels is being utilised in the existing plant.

Name of AFR	Capacity
Agro Waste	150 TPD
Tyre Chips/carbon	100 TPD
Plastic waste	100 TPM
ETP sludge of textile unit	12,000 TPA
Pb-Zn slag	30,000 TPA
Waste mix liquid	3500 MTM
waste mix solid and liquid	700 MTM
waste mix solid	4000 MTM
Jerosite (used in cement mill as raw material)	25000 MTA
Waste liquid blend and waste solid blend (Iron sludge)	12000 MTM
Furnace/Reactor residue and debris	2500 MTA
Tarry residue (TDI Tar)	10000 MTA
Oily sludge emulsion	5000 MTA
Organic residue	5000 MTA
Residues from alkali wash of fuels	2500 MTA
Spent catalyst and molecular sieves	2500 MTA
Oil from waste water treatment plant	5000 MTA
Phosphate sludge	15000 MTA
Plating metal sludge	10000 MTA
Spent catalyst	10000 MTA
Drill cutting excluding those from water-based mud	5000 MTA
Contaminated aromatic, aliphatic or naphthenic solvents may or may not be fit for reuse	5000 MTA

The unit is also open for options as suggested by the regulatory authority and shall also explore the possibility of utilizing the waste with high calorific values.

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Spent solvent	10000 MTA	
Process sludge	5000 MTA	
Process waste residue and sludge	45000 MTA	
Process waste residue and sludge (paint sludge)	25000 MTA	
Spent solvent (21.2)	10000 MTA	
Spent catalyst (22.1)	3000 MTA	
Process residue (22.2)	3000 MTA	
Waste residue (23.1)	10000 MTA	
Spent solvent (23.2)	3000 MTA	
Spent solvent (26.4)	7500 MTA	
Spent catalyst (26.5)	7500 MTA	
Spent catalyst (28.2)	2000 MTA	
Off specification product (28.4)	5000 MTA	
Spent solvent (28.6)	20000 MTA	
Process wastes/residues 29.1	20000 MTA	
Sludge containing residual pesticides (29.2)	5000 MTA	
Spent solvent (29.4)	20000 MTA	
Spent catalyst (29.5)	7500 MTA	
Empty barrels/containers/liners contaminated with haz chemicals/waste 33.1	25000 MTA	
Contaminated cotton rags 33.2	20000 MTA	
Spent iron exchange resin containing toxic metals 35.2	25000 MTA	
Chemical sludge from WWT Plant 35.3	50000 MTA	
O & G skimming 35.4	4000 MTA	
Any process or distillation residue 36.1	10000 MTA	

		Spent carbon or filter medium 36.2	10000 MTA	
		Ash from incinerator and flue gas cleaning residues 37.2	5000 MTA	
		Oily sludge/emulsion 4.1	10000 MTA	
		Spent catalyst 4.2	7500 MTA	
		Slop oil 4.3	5000 MTA	
		Organic residue from process 4.4	4000 MTA	
		Spent clay containing oil 4.5	4000 MTA	
		Used or spent oil 5.1	125 KLA	
		Waste oil 5.1	125 KLA	
		Waste or residues containing oil 5.2	20000 MTA	
		Waste clothes/cotton waste/fibre etc B3030	20000 MTA	
		Tyre fibre B3040	10000 MTA	
		RDF (sorted MSW)	20000 MTA	
		Carbide lime sludge (OW)	3000 MTA	
		ETP Bio solid soft drink industry (OW)	2000 MTA	
		FF Slag/ISF slag (OW)	20000 MTA	
		FMCG (OW)	20000 MTA	
		Red Mud (OW)	30000 MTA	
		Spent carbon from soft drink industries (OW)	2000 MTA	
		Toxic effluent containing chemical (OW)	40000 MTA	
		Waste mix liquid (OW)	5000 MTA	
		WTP sludge from soft drink industry (OW)	2000 MTA	
		Chemical gypsum	10000 TPM	
4	The treated water from the STP shall be recycled and reused to conserve the water.	The STP is based on Conventional Activated Sludge Process (ASP) technology having capacity of 500 KLD. Quantity of waste water generation is approx. 270 KLD and same is being treated in STP and treated water is being utilized for		

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K.CEMENT WORKS, NIMBAHERA
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		plantation/greenbelt. The same practice will be followed for proposed line -4 unit.																																																	
B	General Conditions:																																																		
1	An amount of Rs 4.22 Crores proposed towards Corporate Environment Responsibility (CER) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates	Point noted and being complied An amount of Rs 4.22 Crores proposed towards Corporate Environment Responsibility (CER) shall be utilized as capital expenditure in project mode. Further the company had undertaken various works under CSR.	Detailed action plan has been given in Annexure-2																																																
2	Green belt shall be developed in 72.77 Ha with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant	Total 57.772 ha. Tree planted till FY 2018-19 (i.e. almost 33.92% of total project area) has been developed <table border="1"> <thead> <tr> <th>S. No.</th><th>Year</th><th>Name of Species</th><th>No. of Species</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Up to March' 2006</td><td>Neem,</td><td>1,05,915</td></tr> <tr> <td>2.</td><td>2006 - 07</td><td>Sheesham,</td><td>7,200</td></tr> <tr> <td>3.</td><td>2007 - 08</td><td>Jamun,</td><td>6,051</td></tr> <tr> <td>4.</td><td>2008 - 09</td><td>KesiaSamiya,</td><td>4,370</td></tr> <tr> <td>5.</td><td>2009 - 10</td><td>Kachnar,</td><td>9,235</td></tr> <tr> <td>6.</td><td>2010 - 11</td><td>Karenj,</td><td>7,968</td></tr> <tr> <td>7.</td><td>2011 - 12</td><td>Peepal,</td><td>3,000</td></tr> <tr> <td>8.</td><td>2012 - 13</td><td>Banyan,</td><td>3,221</td></tr> <tr> <td>9.</td><td>2013 - 14</td><td>Amla,</td><td>19,719</td></tr> <tr> <td>10.</td><td>2014 - 15</td><td>Custard</td><td>5,615</td></tr> <tr> <td>11.</td><td>2015 - 16</td><td>Apple, Ashok,</td><td>3,056</td></tr> </tbody> </table>	S. No.	Year	Name of Species	No. of Species	1.	Up to March' 2006	Neem,	1,05,915	2.	2006 - 07	Sheesham,	7,200	3.	2007 - 08	Jamun,	6,051	4.	2008 - 09	KesiaSamiya,	4,370	5.	2009 - 10	Kachnar,	9,235	6.	2010 - 11	Karenj,	7,968	7.	2011 - 12	Peepal,	3,000	8.	2012 - 13	Banyan,	3,221	9.	2013 - 14	Amla,	19,719	10.	2014 - 15	Custard	5,615	11.	2015 - 16	Apple, Ashok,	3,056	Green belt over an additional area of 15 ha. will be developed outside the plant premises as indicated in EIA/EMP report. Details attached as Annexure-3
S. No.	Year	Name of Species	No. of Species																																																
1.	Up to March' 2006	Neem,	1,05,915																																																
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		12. 2016 - 17	Kadam, Guyava, Lemon, Mango, Banana etc. Neem, Sheesham, Jamun, Kachnar, Boganvolla, Amaltas, Kajurana	8,241 5080 6483 4521	
3	The Capital cost Rs. 36.80 Crores (21.96 Crores for Existing+14.84 Crores for expansion) and annual recurring cost Rs 4.08 Crores per annum (Rs. 2.87 Crores for existing + 1.21 Crores for expansion) towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.	13. 2017-18 14. 2018-19 15. 2019-20 (up to September 19)	Total	1,97,870	Against the estimated environmental protection cost Rs. 3,39,09,247/- has been incurred towards the installation bag filter and bag filter fan for roller press with cement mill and rest of the cost will be under line-4 clinkerisation process unit.
Description of Item Capital Cost (In Lacs) Existing Recurring Cost (In Lacs) Air Pollution Control/ Noise Water Pollution Control Environmental Monitoring and Management Green Belt Development 1804 55.0 100.0 175.0 180.0 8.0 14.04 17.5					

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K.CEMENT WORKS, NIMBAHERA
(Period April 2019 to September 2019) Dated 26.11.2019

		<table><tr><td>Occupational Health</td><td>62.0</td><td>6.804</td></tr><tr><td>Total</td><td>2196.0</td><td>226.344</td></tr></table> The funds allocated for the proposed line 4 which is in progress is Rs. 14.84 crores with recurring amount of 1.21 crores. The action plan for the same is as follows: <table><tr><th rowspan="2">Description of Item</th><th colspan="2">Proposed</th></tr><tr><th>Capital Cost (In Lacs)</th><th>Recurring Cost (In Lacs)</th></tr><tr><td>Air Pollution Control/ Noise</td><td>1288.65</td><td>99.5</td></tr><tr><td>Water Pollution Control</td><td>20.0</td><td>0.60</td></tr><tr><td>Environmental Monitoring and Management</td><td>124.5</td><td>12.38</td></tr><tr><td>Green Belt Development</td><td>46.5</td><td>6.50</td></tr><tr><td>Occupational Health</td><td>5.0</td><td>2.5</td></tr><tr><td>Total</td><td>1484.65</td><td>121.48</td></tr></table>	Occupational Health	62.0	6.804	Total	2196.0	226.344	Description of Item	Proposed		Capital Cost (In Lacs)	Recurring Cost (In Lacs)	Air Pollution Control/ Noise	1288.65	99.5	Water Pollution Control	20.0	0.60	Environmental Monitoring and Management	124.5	12.38	Green Belt Development	46.5	6.50	Occupational Health	5.0	2.5	Total	1484.65	121.48	
Occupational Health	62.0	6.804																														
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Green Belt Development	46.5	6.50																														
Occupational Health	5.0	2.5																														
Total	1484.65	121.48																														
4	The project proponent shall (Air Quality Monitoring):																															
a	install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9 th May, 2016 (Cement) and 10th May, 2016 (Co-	- Continuous emission monitoring system has installed for monitoring of PM, SO2 and NOx at the stack of all Kilns, Boilers and real time continuous monitoring system has connected with 24x7 to SPCB and CPCB online servers. Opacity meters have been installed for continuous monitoring of PM at the stack of coal mill, cement mill and clinker cooler & connected 24x7 with the RSPCB & CPCB servers. - The stack of Raw Mill Kiln, Clinker Cooler, Coal Mill, Cement mill of all units are complying with PM< 30 mg/Nm3. All the stacks are installed with																														

	processing Cement); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	emissions control devices like bag house and ESPs. PM emission levels are < 50 mg/Nm ³ for CPP stack. Complying with SO ₂ <100 mg/Nm ³ for kiln. De-Nox system have been installed at kiln. CEMS Remote calibration done by CPCB and periodical calibration by OEM.	
b	Monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	The fugitive emission monitoring is being done regularly in our existing plant and bag filters has been installed at material discharge point and water spraying are been done in coal yard regularly & other raw material yard. Guideline / Code of practice issued by the CPCB in this regard are being followed and same will be followed for line -4 also Following measures have been taken for the control of fugitive emissions: • Covered vehicle used for cement and clinker transportation. • Closed containers and bulkers for fly ash transportation. • Rail along with road used for raw material/finished product transportation. • All vehicle movement area is concreted. • Silos for the storage of Clinker and fly ash. • All unloading hoppers are covered and provided with bag filters. • Bag dust collectors have been provided at all material transfer points. • Water spray system has been provided with reclaimers and limestone unloading points. • Vacuum sweeping machines are being used for better housekeeping. • Green Belt all around the plant premises. • Fugitive emissions are within limit. Emission level is enclosed as Annexure-4.	

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c	Install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions;	- Ambient air quality is being monitored at four locations considering one upwind and downwind direction. Results of the monitoring report indicate that all the parameters are within the permissible limits. - Photographs showing online AAQMS are enclosed as Annexure-10A	Online CAAQMS system already installed at 4 locations in periphery of plant within plant area and 24x7 connected to RPCB/CPCB web portal.
d	Submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality/fugitive emission to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Point noted and being complied - Ambient air quality is being monitored at four locations considering one upwind and downwind direction. Results of the monitoring report indicate that all the parameters are within the permissible limits. - For Results of ambient air quality & Stack monitoring please refer Annexure-4. - Six monthly compliance reports are submitted on regular basis to the RO/ZO of the MOEF, CPCB and RPCB. - Last MOEF &CC compliance report submitted vide letter no. NBH/PC/A/11/965, dated 28.05.2019.	
5	The project proponent shall (Water Quality Monitoring):		
A	install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated	- Not applicable for cement plant. - Camera & flow meter are installed for neutralization pit at CPP & WHR for monitoring of treated effluent. The same practice will be continued in proposed expanded capacity also.	

	25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.		
b	Monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories; and	Ground water quality is being monitored regularly (pre and post monsoon) through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories. Reports are enclosed as Annexure-5 .	
c	Submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Point noted and being complied - Ground water quality is being monitored regularly. Results of the monitoring report indicate that all the parameters are within the permissible limits. - Results of ground water quality monitoring (refer annexure-5) and for effluent monitoring please refer Annexure-4. - Six monthly compliance reports are submitted on regular basis to the RO of the MOEF, CPCB and RPCB.	
6	The project proponent shall (Air Pollution Control):		

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a	Provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	For the existing plant, Bag house has been installed at raw mill, kiln, Coal mill & Cement mill. ESP has installed at cooler stack to control emissions and fugitive emissions. Same measures will be adopted for unit line -4.	
b	Provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;	Mechanized bag cleaning facilities for better maintenance of bags has been provided and same practiced will be followed after expansion also;	
c	Provide pollution control system in the cement plant as per the CREP Guidelines of CPCB;	- Point noted and complying - For the existing plant, Bag house has been installed at raw mill, kiln, Coal mill & Cement mill. ESP has installed at cooler to control stack emissions and fugitive emissions. Same measures will be adopted for unit line -4.	
d	Provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;	Three nos. of mobile vacuum cleaner are facilitated to clean plant roads, shop floor & roofs regularly in existing plant and same practice will be maintained in proposed plant.	
e	Recycle and reuse lime fines, coal fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after agglomeration;	Dust generated from raw mill dust, coal dust, clinker dust and cement dust from Pollution control equipment like Bag house / ESP are being recycled and reused in the cement manufacturing process in our existing plant. The same practice will be followed for line-4 after commencement	
f	Ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;	All raw material transportation in covered dumper. The separate truck parking area facility is provided in the existing plant. The same practice will be adopted for line-4 unit.	

g	Provide wind shelter fence and chemical spraying on the raw material stock piles;	Covered shed are provided for storage of raw materials & also developed dense plantation around the plant.	All raw material are kept in cover shed and closed silos, hence wind shelter fence is not required.																				
h	Provide Low NOX burners as primary measures and SCR /NSCR technologies as secondary measure to control NOX emissions. Have separate truck parking area and monitor vehicular emissions at regular interval	- Low NOX burners have been installed in kiln -3 & SNCR system for SLC to control NOx emissions and advance technology with ILC plant for line - 4 will be install to that meet the NOX emission well within norm. - Separate truck parking area has been provided and only PUC certified vehicles are allowed. - The SNCR photographs are enclosed as Annexure-6																					
7	The project proponent shall (Water Pollution Control):																						
a	Adhere to 'zero liquid discharge';	Zero' liquid discharge are being maintained.																					
b	Provide Sewage Treatment Plant for domestic wastewater; and	STP of capacity: 500KLD; based on Activated Sludge Process (ASP) technology has been provided for domestic waste water treatment and treated water is being utilised for plantation.																					
c	Provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	The garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains has been provided.																					
8	The project proponent shall (Water Conservation)																						
a	Practice rainwater harvesting to maximum possible extent;	- Existing Rainwater Harvesting Structures: 18 Nos has been constructed. - After expansion the daily water requirement will be 2,747 Cu. Day = 9,06,510 Cu.m/ annum. <table border="1"> <thead> <tr> <th>Detail</th><th>Area (Sq. m)</th><th>R. C.</th><th>E. R. (Cu.m/ Annum)</th></tr> </thead> <tbody> <tr> <td>Rooftop</td><td>3,24,910</td><td>85</td><td>2,22,595</td></tr> <tr> <td>Paved</td><td>7,23,370</td><td>70</td><td>4,08,125</td></tr> <tr> <td>Natural recharge through water used in green belt development</td><td>370</td><td>30</td><td>36,630</td></tr> <tr> <td>Open Area Plant (Natural Recharge)</td><td>2,79,919</td><td>4</td><td>9,025</td></tr> </tbody> </table>	Detail	Area (Sq. m)	R. C.	E. R. (Cu.m/ Annum)	Rooftop	3,24,910	85	2,22,595	Paved	7,23,370	70	4,08,125	Natural recharge through water used in green belt development	370	30	36,630	Open Area Plant (Natural Recharge)	2,79,919	4	9,025	
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			Open Area Mine (Natural Recharge)	71,23,875	4	2,29,674
			Recharge through check bund and injection well south of mine area.	87,00,000	20	11,21,952
			Total			20,28,001
		Water meters at all strategic locations has been provided in the existing plant.				
b	Provide water meters at the inlet to all unit processes in the cement plants; and					
c	Make efforts to minimise water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.	• Cement manufacturing process is based on dry process technology. • Air cooled condensers in captive power plant is installed • Treated waste water from CPP is being reused in coal yard for dust suppression • WHR treated waste water is being recycle in cement plant for machineries cooling purpose only. • Domestic sewage generated is being treated at STP and the treated water is used for plantation and greenbelt development. • 'Zero' liquid discharge are being maintained.				
9	The project proponent shall (Energy Conservation):					
a	Provide Waste heat recovery system for kiln and cooler;	Waste heat recovery system has provided in the existing kiln and cooler to generate power. The existing power generation through WHRB is 13.2 MW. Same will be explore in line -4.				
b	Make efforts to achieve power consumption less than 65 units/tonne for Portland Pozzolona Cement (PPC) and 85 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker;	All suitable measures like VVVF, high efficient motors have been adopted to reduce power consumption.				

c	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;	Solar power is installed at JK ITI building for street light, open area, parking area and water heater etc.	
d	Provide the project proponent for LED lights in their offices and residential areas;	• LED lights provided in office & residential township.	
e	maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards; and	Complying with, Fly ash generated from own power plant 100% utilized in manufacturing of PPC cement. Sweetener is being used in limestone to achieve desire LSF.	
f	Maximize utilization of alternate fuels and Co-processing to achieve best practice norms	The details of alternate fuels are being utilised in the existing plant is given in specific condition point no -3	
10	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport	Point noted and being complied All precautions to reduce impact of transport of raw material etc. Fly ash is transported by pneumatic system and all type of materials are transported by covered truck, provide paved roads & regular sprinkling of water on roads. There are separate parking areas for trucks with green belt on the periphery and End product also transporting through rail to reduce the road transport.	
11	Used refractories shall be recycled as far as possible.	Used refractories is sold and partially recycled in existing plant and same practice will be adopted in proposed plant	
12	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	Point noted and will be complied However, we are continuously making efforts to reduce CO2 emissions. 1. In future we will increase PPC production by which less clinker will be require. 2. Power generation through WHRB and consumed generated power on priority. Possible extent to explore in proposed unit also	

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13	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan are implemented.	
14	The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act	There is no any activity is carried out in high temperature work zone however during shutdown we start working after cooling of equipment and same practice will be followed in proposed unit. Personal protective equipment is being provided to respective worker.	
15	The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.	Agreed and under our company policy.	
16	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.	All CREP recommendations have been implemented.	
	S. No.	Action	
	1	Cement Plant which are not complying with notified standards:- • Augmentation of existing Air Pollution Control Devices - by July 2003. • Replacement of existing Air Pollution Control Devices - by July 2004.	J. K. Cement Works is already complying with notified standards and Air Pollution Control Equipments will be installed in proposed expansion project.

2	Cement plant located in critically polluted or urban areas (including 5Km distance outside urban boundary) will meet 100 mg/Nm ³ limit of particulars matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/ Nm ³	Company is complying emission standard of particulate matter less than 30 mg/ Nm ³ .
3	The new cement kilns to be accorded NOC/Environmental Clearance w.e.f. 01.04.2003 will meet the limit of 50 mg/ Nm ³ for particulate matter emissions.	Particulate Matter emission limit of 30 mg/ Nm ³ are being followed. All Pollution Control Equipments have been/ will be designed to meet the prescribed standard.
4	CPCB will evolve load based standards by December 2003.	Actions will be taken as per recommendation of CPCB.
5	CPCB and NCBM will evolve SO ₂ and NOx emission standard by June 2004.	Actions will be taken as per recommendation of CPCB.
6	The cement industries will control fugitive emissions from all the raw material and products storage and transfer points by December 2003. However, the feasibility for the control of fugitive emissions from limestone and coal storage areas will be decided by the National Task Force (NTF). The NTF shall submit its recommendation within three months.	Covered storage shed/ Silos for Clinker, Fly Ash, Gypsum and Cement have been done and same will be followed in proposed expansion. Water spray arrangement is provided for raw materials at identified locations. All conveyor belts are covered to avoid wind blowing of fines. All material transfer points are fully enclosed and equipped with dust extraction systems. Floors in the plant and at main gate truck parking area are concreted to mitigate fugitive dust generation. Regular sweeping of cemented roads and floors through vacuum sweeper machines is being done.
7	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum coke as fuel in cement kiln by July 2003.	Actions will be taken as per recommendation of CPCB. Pet coke usage is being permitted by CPCB/ RPCB and being used in existing kiln as a fuel and same will be followed in proposed line-4.
8	After performance evaluation of various types of continuous monitoring equipment and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/ sections for installation of continuous monitoring equipment. The industry will install the continuous monitoring systems (CMS) by December 2003.	Continuous monitoring equipment has been installed at all stacks by JKCW to monitor particulate emissions.
9	Trappings in kiln ESP to be minimized by July 2003 as per the recommendation of NTF. Recommendations of NTF are as under: a) Pre -blending system for coal should be adopted to get uniform coal quality. b) Installation of state of art distributed control logic system, which reduces the calciner firing, step by step,	Not applicable. As the company have bag filter and Bag Houses in Kilns.

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	as CO concentration increases. c) Proper records should be kept of the number of ESP tripping with duration of its non-functioning (such record should preferably be automatic) d) ESP availability should be enhanced to more than 98%	
10	Industries will submit the target date to enhance the utilization of waste material by April 2003.	100 % Fly ash generated in CPP is being utilized in cement plant
11	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003.	Hazardous & Other Waste are being utilized as AFR in existing kiln and same practice will be followed in proposed line-4 with due permission by regulatory authority.
12	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003.	Waste Heat Recovery Power Plant of 13.2 MW capacity has been utilised with existing cement plant hot waste gases; J. K. Cement Works is now planning to increase capacity from 13.2 MW to 15.0 MW with proposed expansion project.
17	A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.	A separate environmental management cell with qualified personnel is already established & has sufficient monitoring equipment in environmental laboratory.
18	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc shall be provided for construction worker within the site. The housing shall be removed after the completion of the project.	
19	The project authorities must strictly adhere to the stipulations made by the State	The stipulations made by the State Pollution Control Board and the State Government are being/ will be strictly complied.

	Pollution Control Board and the State Government.		
20	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Point noted and agreed	
21	The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.	Being followed - Hazardous waste generated from our existing plant i.e. Used Oil (5.1) and Waste oil (5.2) are being sold out to authorized recyclers of RPCB/CPCB.. - Used Batteries is sold to CPCB, RSPCB, authorized vendors. - Authorization has been obtained from SPCB as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.	
22	The storage of NH3 and other hazardous chemicals at the site shall be as per the provisions of Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended from time to time	NH ₃ use in SNCR is approx.. 25 % aqueous solution which is being supplied by manufacturing company. All safety measures inter locked in storage & handling of NH ₃ & others chemical are being followed as per provisions of Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended.	
23	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	The ambient noise levels are being regularly monitored and monitoring results indicates that the noise levels with the plant at all locations are well within the standards prescribed under E(P)A Rules, 1986 (For Monitoring results please refer Annexure-4)	
24	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Point Noted and complied. All Occupational health and safety measures are being taken by the management. Health Record of the workers is being maintained. The company has dispensary and sufficient medical staff for the existing unit to monitor the health of the employees/ workers.	
25	The project proponent shall also comply with all the environmental protection measures	Agreed	

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	and safeguards recommended in the EIA/EMP report.		
26	Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants.	Installed and is in operation	
27	Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.	Agree & Implemented. Colour coded waste collection bins at shop floor to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated colour bins and same practice will be adopted in proposed plant.	
28	Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant)	Point noted and agreed The kitchen waste after segregation & collection of dry and wet garbage is being / will be sent to Nimbahera Nagar Palika for proper disposal.	
29	The project proponent shall (post-EC Monitoring):		
a	send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;	Implemented.	
b	Put on the clearance letter on the web site of the company for access to the public.	Complied	
c	Inform the public through advertisement within seven days from the date of issue of	Implemented & the necessary information already sent to the concerned authority.	

	the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at http://envfor.nic.in .		
d	Upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;	Point noted and agreed The status of compliance of the stipulated environment clearance conditions, including results of monitored data is being uploaded regularly on website.	
e	Monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;	Regular monitoring of PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters are being monitored. Data on PM, SOx and NOx are continuously displayed outside the premises of plant and uploaded on the website of the company;	
f	Submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;	Agreed. Six monthly reports are being regularly submitting to concern offices as given in time frame, previous clearance letter. Last Six-Monthly Monitoring report was sent on 28.05.2019.	

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g	Submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;	Followed and Agreed Complying with, The Environment statement i.e. Form V is being submitted regularly of each financial year of existing plant. FY 2018-19 ESR Nimbahera cement plant, 22 MW CPP and 13.2 MW WHR has submitted at RSPCB office vide letter no. NBH-PC-ESR-21- 3045, 3050 & 3049 respectively, dated 25.09.2019.	
h	Inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Point noted and will be complied	
30	The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to grant environmental clearance for the proposed expansion of Integrated Cement Plant.	Point noted	
31	The ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Point noted	
32	The ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions	Point noted	

33	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and that during their presentation of EAC. The commitment made by the project proponent to issue raised during public hearing shall be implemented by the proponent	Point noted and Agreed	
34	The above conditions shall be enforced, inter-alia under the provisions of the water (Prevention and control of pollution)Act 1974 , the Air (Prevention & control of pollution)Act,1981, the Environment (Protection)Act ,1986, Hazardous and other waste (Management and Transboundary Movement)Rules 2016 and the Public Liability Insurance Act 1991 along with their amendments and rules	Point noted and Agreed	
35	Any appeal against this EC shall lie with NGT ,if preferred within a period of 30 days as prescribed under Section 16 of NGT Act,2010	Point noted & Agreed	

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Annexure-1

S.No	Activity	Year wise budgetary provision in Lakhs (PEACOCK)										
		1	2	3	4	5	6	7	8	9	10	Total
1	Construction of five small tree groves in a different habitation area with planting of 200 sapling of Neem, Siris, Ardu, Bad, Pipal and suitable shady trees in each grove and creation of meadows(Grass land) @Rs.300 per plant(one grove per year for five years)	0.60	0.60	0.60	0.60	0.60	---	---	---	---	---	3.0
2	Construction of small water holes, creation of salt licks in each grove and watering facilities & maintaining the water quality in each grove. (Rs. 50,000/- per year for 10 years)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	5.00
3	Maintenance of 200 Plants including causality replacement(20% of total plants species) @Rs.200 per plant per year	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	4.00
4	Awareness programme (Minimum 2 camps per year for organizing play, Posters and question competitions, brochures for conservation of peafowl (Rs. 50,000 per year for 10 years)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	5.00
5	The farmers in the buffer area will be motivated to plant fruit and local species of trees on the boundaries of their agriculture fields and near by their houses	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	2.00
6	Providing of rescue for needful wildlife equipments and (First year 1.0 lakh for	1.0	0.20	0.20	0.25	0.25	0.30	0.30	0.50	0.50	0.50	4.0

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Rupees Fifty-Seven Lakhs only

Sl.No	Proposed BUDGET FOR CER SCHEMES FOR THE FINANCIAL YEAR 2017-22				Expenses incurred		Action plan
	Enterprise Social Commitment Activities	Proposed BUDGET FOR CER SCHEMES FOR THE FINANCIAL YEAR 2017-22	2017-18	2018-19	2019-20		
1	Centre for women training Women Income Generating Programmes through the various economic activities - Cutting & Tailoring, Pickle & Sauces making, Soft Toys & Gem Jeweller, and Beautician Courses will be continued.	5000000		Rs 1554767 has been incurred towards Sparsh Sanitary Pad Project for Women self help groups and providing structured setups & training for earning through production and sell of low cost sanitary pads. Organising training programs for Woman Skill development.	Rs 633217 has been incurred towards Sparsh Sanitary Pad Project for Women self help groups and providing structured setups & training for earning through production and sell of low cost sanitary pads. Organising training programs for Woman Skill development. Donated stitching machines to Mewar Viklang Seva Samithi for supporting livelihood activities.	The proposed budget for F.Y 2018-19 and 19-20 was Rs 3500000. The expenses incurred is Rs 2187984. The balance amount of Rs 1312016 has been less incurred from the proposed budget which will be outlay in the next F.Y.i.e.20-21 or 3rdqtr of F.Y.19-20. The proposed budget for F.Y 20-21 and 21-22 will be incurred towards proposed activities	
2	Community Centre required at Mangrol Mangrol residents were continuously requiring a Community centre as mention in the Public Hearing	4000000		Rs 377413 has been outlay towards Various community welfare activities which includes beautification of railway station and providing facilities & Renovation of structures of public interest Rs 19059929 has been incurred towards Construction of roads for connectivity in rural area, panchayat area, link road, Gitti road, Gravel road, CC roads	Rs 517440 has been out layed towards Manpower hired for smooth working of CSR activities & Construction of Community Centre.	The proposed budget for F.Y 2018-19 was Rs 40,00000. The expenses incurred is Rs 19954782. The balance amount of Rs 15,954,782 has been extra incurred from the proposed budget. The proposed budget for F.Y 20-21 and 21-22 will be incurred towards proposed activities	

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3	Medical & Health							Rs 162108 has been incurred Medical Check up camps in nearby villages, distributed medicines & organised health awareness programs. Expenses for maintenance of Aganbadi Kendra.	Rs 2095081 has been incurred towards Medical Check up camps & Eye camps in nearby villages, distributed medicines & organised health awareness programs. Providing facilities at Aganbadi center. Construction of toilets & Supporting in different projects like NandGhar Yojana.	The proposed budget for F.Y 2018-19 & 19-20 was Rs 27,00000 The expenses incurred is Rs 2257189. The balance amount of Rs 442811 has been less incurred from the proposed budget which will be carry forwarded to the next Qtr of 2019-20 or next F.Y i.e.20-21 and budget shall not be diverted for other activities
	Further modern technology Development in the Hospital Nimbahera(Path lab equipments, OT, Diagnostic center)	2000000								The proposed budget for F.Y 2018-19 & 19-20 was Rs 27,00000 The expenses incurred is Rs 2257189. The balance amount of Rs 442811 has been less incurred from the proposed budget which will be carry forwarded to the next Qtr of 2019-20 or next F.Y i.e.20-21 and budget shall not be diverted for other activities
	Establishment of the Blood bank in Nimbahera in approach of the Hospital, Nimbahera.	1900000								The proposed budget for F.Y 2018-19 & 19-20 was Rs 27,00000 The expenses incurred is Rs 2257189. The balance amount of Rs 442811 has been less incurred from the proposed budget which will be carry forwarded to the next Qtr of 2019-20 or next F.Y i.e.20-21 and budget shall not be diverted for other activities
4	Water supply line works required at Shahabad									
	Laying of Water supply line works in Shahabad 4.3 km , to solve the Water supply	2000000								The proposed budget, of 2000000 in F.Y. 18-19 shall be carry forwarded to the next F.Y 20-21 and the activities proposed (F.Y 2018-19) shall also be undertaken apart from the activities already proposed in the F.Y. 20-21.
	Total	14900000								

Sl. No	ESTIMATED BUDGET CER SCHEMES FOR THE FINANCIAL YEAR 2017-22		Expenses incurred			Action plan
	ESTIMATED BUDGET CER SCHEMES FOR THE FINANCIAL YEAR 2017-22		2017-18	2018-19	2019-20	
1	School/ Education					
	Construction of Three New rooms in Govt.SchoolPhacherAhiran(Total six room constructed-500 sq.ft each room)	3000000		In the F.Y 2018-19 Rs. 4433705has been incurred towards Infrastructural work at schools like building classrooms, furnishing with necessary equipments& furniture. Electrification of schools in nearby areas. Providing coaching facilities to children in nearby villages. Donation to NGO for education promotion		The proposed budget for F.Y 2017-18,19-19& 19-20 was Rs 4300000 The expenses incurred is Rs 4033705 the balance amount of Rs 266295will be incurred for F.Y 20-21 and 21-22 will be incurred towards proposed activities.
	To recognize and motivate the Students on Independence day function (8th to 12th class) by Distributor of Silver Medal to those who have achieved 65% and above marks in Board Exam Nimbahera	200000				
	Permanent water body creation by anicut/ check bund.	2200000				
2	Livelihood Promotion/ Job Creation & Skill Generation					
	Organise a Rural Skill developing programe for Women &Youth. Provide the various kind of training(Handicrafts, agriculture, Cattle farming, jewellery, Tailoring, Cottage industrial training)	3700000		Rs 3651855has been incurred towards Sparsh Sanitary Pad Project for Women self help groups and providing structured setups & training for earning through production and sell of low cost sanitary pads.	--	Rs 1498587has been incurred towards Sparsh Sanitary Pad Project for Women self help groups and providing structured setups & training for earning through production and sell of low cost sanitary pads.
3	Infrastructure work					
	C.C.Road& Drainage line construction work in Phalwa village.(P.P.Mode)&Maintenance	8000000		In the F.Y. 2017-18, FY 2018-19 and FY 2019-20 Rs 24855598has been incurred Construction of a fully modern Convention Center for the society. Developmental work at Anganbari Centers. Road construction in nearby Rural areas, Park Development & Maintenance.		The proposed budget for F.Y 2017-18,19-19& 19-20 was Rs 13450000 The expenses incurred is Rs24855598. The balance amount of Rs 11405598 has been extra incurred from the proposed budget. The proposed budget for F.Y 20-21 and 21-22 will be outlay towards proposed activities
	Grave Yard shed & Boundary wall construction work in Shabad village. (P.P.Mode)	900000				
	Community hall construction work in Bhawliya village (P.P.Mode).	550000				
	Construction &Development of a Community centre in Mangrol village.	4000000				
4	Drinking Water					

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	Water Tanker Supply in Summer season in Nimbahera city & Nearby villages. Mukyamantri JAL SWALAMBAN YOJNA 2017-18.	2000000 1200000	Rs 941045 has been incurred towards Drinking Water arrangement at nearby villages & setting up bore wells & pipeline for ensuring availability of water	Rs 11,96,907 has been expenses towards providing Drinking water facilities for nearby villages. Activities like laying pipelines, tube well and deeping of tube wells as & when required.	Rs 1220990 has been incurred towards Providing Drinking water facilities for nearby villages. Activities like laying pipelines, tube well and deeping of tube wells as & when required.	The proposed budget for F.Y 2017-18,18-19 & 19-20 was Rs 4705000. The expenses incurred is Rs3358942. The balance amount of Rs 1346058 will be carried forward to the next F.Y 20-21 and will be outlay The proposed budget for F.Y 20-21 and 21-22 will be outlay towards proposed activities
	Total	27300000				

Further, Green belt over an additional area of 15 ha.

Sr. No	Location	Area (ha) proposed	Proposed No. of plants	Proposed Budget @ Rs 300/sampling	Plantation achieved			Action plan
					Years	Area covered	No of plant planted	
1	Tillakhera Lime stone Mine	2.33	4660	13,98,000	2018-19	1.89	1890	970 No of plants will be planted in the next year
					2019-20	1.1	1800	
2	Along the road of Nimbahera Plant to Maliakhera and Mangrol Mines	2.33	4660	13,98,000	2018-19	1.44	1444	3216 No of sampling will be planted in the next year
3	Ahipura Lime Stone Mine	2.33	4660	13,98,000	2018-19	1.10	1110	2600 No of plants will be planted in the next year
					2019-20	0.67	950	
4	Maliakhera Lime Stone Mine	2.33	4660	13,98,000	2018-19	1.25	1255	2155 No of plants will be planted in the next year
					2019-20	1.2	1250	
5	Karunda Lime Stone Mine	2.33	4660	13,98,000	2018-19	1.43	1435	1925 No of plants will be planted in the next year
					2019-20	1.0	1300	
6	Mangrol Lime Stone Mine	2.33	4660	13,98,000	2018-19	1.19	1195	2032 No of plants will be planted in the next year
					2019-20	0.8	1433	
7	Nimbahera River	0.5	1000	3,00,000		1.5	1805	An area of 1.0 Ha plantation proposed at near Nimbahera and Kadmali river but the same has been planted at other place (outside of plant premises) and 1805 nos of plant has been planted covering an area of 1.5 Ha
8	Kadmali River	0.5	1000	3,00,000				The trees namely Neem, Kachnar, Boganvolia, Amaltassps has been planted
	Total	15	29960	84,48,000		14.57	16867	5060100

Species planted : Neem, Sheesham, Jamun, KesiaSamiya, Kachnar, Karenj, Peepal, Banyan, Amla, Custard Apple, Ashok, Kadam, Guyava, Lemon, Mango, Boganvolia, Amaltas, Kajurana etc.

J.K. Cement WORKS, NIMBAHERA (RAJ)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE

HALF YEARLY REPORT FY 2019-20 (April' 2019 to September' 2019)

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT	CROSS SECTIONAL AREA OF DUCT (M ²)	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)
April'19								
02.04.2019	L.S. CRUSHER (B.F.)	0.26	322	10.69	2.57	12.7	13.6	0.003
13.04.2019	L.S. CRUSHER (B.F.)	0.26	320	11.43	2.77	14.9		0.004
20.04.2019	L.S. CRUSHER (B.F.)	0.26	318	11.07	2.70	11.8		0.003
24.04.2019	L.S. CRUSHER (B.F.)	0.26	326	11.38	2.70	15.1		0.004
May'19								
04.05.2019	L.S. CRUSHER (B.F.)	0.26	324	11.01	2.63	11.1	14.1	0.003
STOP	L.S. CRUSHER (B.F.)			STOP				0.000
14.05.2019	L.S. CRUSHER (B.F.)	0.26	327	11.23	2.66	11.7		0.003
20.05.2019	L.S. CRUSHER (B.F.)	0.26	328	11.41	2.70	13.7		0.003
29.05.2019	L.S. CRUSHER (B.F.)	0.26	328	11.41	2.70	14.2		0.003
June'19								
05.06.2019	L.S. CRUSHER (B.F.)	0.26	327	10.26	2.43	14.9	15.3	0.003
13.06.2019	L.S. CRUSHER (B.F.)	0.26	328	10.07	2.38	15.8		0.003
20.06.2019	L.S. CRUSHER (B.F.)	0.26	330	11.06	2.60	16.0		0.004
25.06.2019	L.S. CRUSHER (B.F.)	0.26	329	10.57	2.49	14.5		0.003
July'19								
04.07.2019	L.S. CRUSHER (B.F.)	0.26	326	9.85	2.34	14.2	14.6	0.003
11.07.2019	L.S. CRUSHER (B.F.)	0.26	325	10.09	2.41	14.3		0.003
17.07.2019	L.S. CRUSHER (B.F.)	0.26	327	11.56	2.74	15.0		0.004
25.07.2019	L.S. CRUSHER (B.F.)	0.26	324	10.43	2.49	14.7		0.003
August'19								
01.08.2019	L.S. CRUSHER (B.F.)	0.26	324	9.36	2.24	15.4	15.7	0.003
12.08.2019	L.S. CRUSHER (B.F.)	0.26	326	10.54	2.51	17.8		0.004
22.08.2019	L.S. CRUSHER (B.F.)	0.26	327	10.25	2.43	15.2		0.003
29.08.2019	L.S. CRUSHER (B.F.)	0.26	324	9.82	2.35	14.3		0.003
September'19								
04.09.2019	L.S. CRUSHER (B.F.)	0.26	323	11.13	2.67	16.7	16.2	0.004
10.09.2019	L.S. CRUSHER (B.F.)	0.26	325	10.40	2.48	13.9		0.003
17.09.2019	L.S. CRUSHER (B.F.)	0.26	324	9.62	2.30	18.7		0.004
25.09.2019	L.S. CRUSHER (B.F.)	0.26	326	10.78	2.56	15.6		0.003
April'19								
06.04.2019	KILN No.1 (Bag House)	4.90	405	11.69	42.15	13.4	14.2	0.049
12.04.2019	KILN No.1 (Bag House)	4.90	402	11.17	40.57	15.6		0.055
25.04.2019	KILN No.1 (Bag House)	4.90	398	10.95	40.17	12.5		0.043
29.04.2019	KILN No.1 (Bag House)	4.90	410	11.57	41.21	15.4		0.055
May'19								
01.05.2019	KILN No.1 (Bag House)	4.90	424	12.14	41.81	13.2	13.5	0.048
09.05.2019	KILN No.1 (Bag House)	4.90	422	12.82	44.36	13.3		0.051
STOP	KILN No.1 (Bag House)			STOP				0.000
20.05.2019	KILN No.1 (Bag House)	4.90	427	12.05	41.21	13.9		0.049
24.05.2019	KILN No.1 (Bag House)	4.90	433	13.67	46.10	13.5		0.054
June'19								
05.06.2019	KILN No.1 (Bag House)	4.90	425	13.81	47.45	14.0	14.55	0.057
12.06.2019	KILN No.1 (Bag House)	4.90	432	14.22	48.06	15.6		0.065
20.06.2019	KILN No.1 (Bag House)	4.90	429	13.39	45.58	13.2		0.052
25.06.2019	KILN No.1 (Bag House)	4.90	422	13.52	46.78	15.4		0.062
July'19								
01.07.2019	KILN No.1 (Bag House)	4.90	424	14.09	48.52	13.9	13.9	0.058
STOP	KILN No.1 (Bag House)			STOP				0.000
STOP	KILN No.1 (Bag House)							0.000
STOP	KILN No.1 (Bag House)							0.000
August'19								
STOP	KILN No.1 (Bag House)		STOP FULL MONTH					
	KILN No.1 (Bag House)							
	KILN No.1 (Bag House)							
	KILN No.1 (Bag House)							
September'19								
STOP	KILN No.1 (Bag House)		STOP FULL MONTH					
	KILN No.1 (Bag House)							
	KILN No.1 (Bag House)							
	KILN No.1 (Bag House)							

April'19								
03.04.2019	KILN No. 2 (Bag house)	3.80	406	17.29	48.22	10.8	11.1	0.045
13.04.2019	KILN No. 2 (Bag house)	3.80	408	17.78	49.35	10.60		0.045
19.04.2019	KILN No. 2 (Bag house)	3.80	402	17.27	48.65	9.9		0.042
27.04.2019	KILN No. 2 (Bag house)	3.80	410	17.78	49.11	13.2		0.056
May'19								
01.05.2019	KILN No. 2 (Bag house)	3.80	428	17.88	47.31	11.5	11.9	0.047
09.05.2019	KILN No. 2 (Bag house)	3.80	431	18.08	47.50	11.3		0.046
20.05.2019	KILN No. 2 (Bag house)	3.80	434	17.91	46.73	12.5		0.050
24.05.2019	KILN No. 2 (Bag house)	3.80	437	18.74	48.56	12.8		0.054
27.05.2019	KILN No. 2 (Bag house)	3.80	442	18.80	48.17	11.5		0.048
June'19								
STOP	KILN No. 2 (Bag house)	STOP FULL MONTH						
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
July'19								
STOP	KILN No. 2 (Bag house)	STOP FULL MONTH						
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
August'19								
STOP	KILN No. 2 (Bag house)	STOP FULL MONTH						
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
September'19								
STOP	KILN No. 2 (Bag house)	STOP FULL MONTH						
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							
	KILN No. 2 (Bag house)							

April'19								
06.04.2019	KILN No. 3 (Bag House)	3.80	430	18.51	48.75	8.6	9.5	0.036
12.04.2019	KILN No. 3 (Bag House)	3.80	421	18.80	50.57	7.7		0.034
18.04.2019	KILN No. 3 (Bag House)	3.80	428	18.56	49.11	10.6		0.045
26.04.2019	KILN No. 3 (Bag House)	3.80	418	18.12	49.09	10.9		0.046
May'19								
STOP	KILN No. 3 (Bag House)	STOP					10.4	0.000
	KILN No. 3 (Bag House)							0.000
16.05.2019	KILN No. 3 (Bag House)	3.80	439	18.34	47.31	10.2		0.042
23.05.2019	KILN No. 3 (Bag House)	3.80	449	19.37	48.85	10.8		0.046
29.05.2019	KILN No. 3 (Bag House)	3.80	451	19.90	49.97	10.3		0.044
June'19								
05.06.2019	KILN No. 3 (Bag House)	3.80	444.00	18.40	46.93	11.4	11.2	0.046
12.06.2019	KILN No. 3 (Bag House)	3.80	443.00	18.56	47.44	11.7		0.048
20.06.2019	KILN No. 3 (Bag House)	3.80	445.00	17.85	45.42	11.3		0.044
25.06.2019	KILN No. 3 (Bag House)	3.80	447.00	17.59	44.56	10.3		0.040
July'19								
01.07.2019	KILN No. 3 (Bag House)	3.80	442.00	17.00	43.55	10.6	10.2	0.040
08.07.2019	KILN No. 3 (Bag House)	3.80	440.00	18.08	46.53	10.4		0.042
17.07.2019	KILN No. 3 (Bag House)	3.80	443.00	17.86	45.65	9.8		0.039
26.07.2019	KILN No. 3 (Bag House)	3.80	444.00	17.34	44.22	9.9		0.038
August '19								
02.08.2019	KILN No. 3 (Bag House)	3.80	432.00	15.39	40.34	10.00	9.7	0.035
13.08.2019	KILN No. 3 (Bag House)	3.80	438.00	16.81	43.46	10.70		0.040
20.08.2019	KILN No. 3 (Bag House)	3.80	444.00	17.52	44.68	9.5		0.037
27.08.2019	KILN No. 3 (Bag House)	3.80	441.00	16.09	41.32	8.7		0.031
September '19								
02.09.2019	KILN No. 3 (Bag House)	3.80	436.00	17.74	46.08	12.2	11.7	0.049
09.09.2019	KILN No. 3 (Bag House)	3.80	421.00	15.72	42.28	11.4		0.042
17.09.2019	KILN No. 3 (Bag House)	3.80	426.00	16.37	43.51	14.3		0.054
24.09.2019	KILN No. 3 (Bag House)	3.80	410.00	15.36	42.42	8.7		0.032

April'19								
05.04.2019	PRE-CALCINER (Bag House)	7.79	398	15.15	88.37	12.2	12.6	0.093
12.04.2019	PRE-CALCINER (Bag House)	7.79	405	14.97	113.57	10.4		0.102
20.04.2019	PRE-CALCINER (Bag House)	7.79	408	15.23	116.68	12.2		0.123
26.04.2019	PRE-CALCINER (Bag House)	7.79	417	15.97	120.37	15.5		0.161
May'19								
STOP	PRE-CALCINER (Bag House)	STOP					13.2	0.000
	PRE-CALCINER (Bag House)							0.000
16.05.2019	PRE-CALCINER (Bag House)	7.79	410	17.08	128.73	12.3		0.137
23.05.2019	PRE-CALCINER (Bag House)	7.79	421	17.55	131.85	13.8		0.157
29.05.2019	PRE-CALCINER (Bag House)	7.79	420	17.62	131.52	13.5		0.153
June'19								
05.06.2019	PRE-CALCINER (Bag House)	7.79	405.00	13.48	77.27	14.5	13.9	0.097
12.06.2019	PRE-CALCINER (Bag House)	7.79	401.00	14.26	107.83	13.3		0.124
20.06.2019	PRE-CALCINER (Bag House)	7.79	404.00	12.99	97.91	13.6		0.115
25.06.2019	PRE-CALCINER (Bag House)	7.79	408.00	14.16	106.38	14.3		0.131
July'19								
02.07.2019	PRE-CALCINER (Bag House)	7.79	408.00	13.65	77.67	12.9	13.5	0.087
09.07.2019	PRE-CALCINER (Bag House)	7.79	411.00	14.16	108.49	14.3		0.134
17.07.2019	PRE-CALCINER (Bag House)	7.79	405.00	12.95	98.89	13.8		0.118
26.07.2019	PRE-CALCINER (Bag House)	7.79	414.00	14.43	109.83	12.9		0.122
August'19								
02.08.2019	PRE-CALCINER (Bag House)	7.79	404.00	14.62	84.01	10.70	12.2	0.078
14.08.2019	PRE-CALCINER (Bag House)	7.79	401.00	13.57	103.62	12.80		0.115
20.08.2019	PRE-CALCINER (Bag House)	7.79	414.00	14.14	108.69	12.7		0.119
27.08.2019	PRE-CALCINER (Bag House)	7.79	412.00	15.08	115.53	12.5		0.125
September'19								
02.09.2019	PRE-CALCINER (Bag House)	7.79	442.00	17.23	90.49	11.3	13.1	0.088
09.09.2019	PRE-CALCINER (Bag House)	7.79	426.00	15.66	119.98	14.7		0.152
17.09.2019	PRE-CALCINER (Bag House)	7.79	433.00	16.61	128.96	12.6		0.140
24.09.2019	PRE-CALCINER (Bag House)	7.79	421.00	14.70	113.37	13.6		0.133
April'19								
06.04.2019	FOLAX COOLER (E.S.P)	12.56	403	11.10	135.77	21.8	21.7	0.256
12.04.2019	FOLAX COOLER (E.S.P)	12.56	406	11.42	139.69	20.5		0.247
18.04.2019	FOLAX COOLER (E.S.P)	12.56	410	10.61	130.63	21.4		0.242
26.04.2019	FOLAX COOLER (E.S.P)	12.56	418	11.37	137.72	23.0		0.274
May'19								
STOP	FOLAX COOLER (E.S.P)	STOP					22.5	0.000
	FOLAX COOLER (E.S.P)							0.000
16.05.2019	FOLAX COOLER (E.S.P)	12.56	388	9.41	114.35	24.6		0.243
23.05.2019	FOLAX COOLER (E.S.P)	12.56	395	9.97	120.77	20.3		0.212
29.05.2019	FOLAX COOLER (E.S.P)	12.56	397	11.02	132.63	22.4		0.257
June'19								
05.06.2019	FOLAX COOLER (E.S.P)	12.56	395.00	10.92	133.13	23.4	23.6	0.269
12.06.2019	FOLAX COOLER (E.S.P)	12.56	398.00	10.00	121.52	22.7		0.238
20.06.2019	FOLAX COOLER (E.S.P)	12.56	402.00	9.38	113.99	24.9		0.245
25.06.2019	FOLAX COOLER (E.S.P)	12.56	406.00	9.78	118.46	23.3		0.238
July'19								
02.07.2019	FOLAX COOLER (E.S.P)	12.56	405.00	12.07	149.10	23.3	22.9	0.300
09.07.2019	FOLAX COOLER (E.S.P)	12.56	398.00	11.62	143.54	22.6		0.280
16.07.2019	FOLAX COOLER (E.S.P)	12.56	402.00	11.18	137.65	21.9		0.260
27.07.2019	FOLAX COOLER (E.S.P)	12.56	406.00	11.10	136.22	23.6		0.278
August'19								
03.08.2019	FOLAX COOLER (E.S.P)	12.56	424.00	12.34	149.10	24.30	24.1	0.300
12.08.2019	FOLAX COOLER (E.S.P)	12.56	415.00	11.81	143.54	22.90		0.280
20.08.2019	FOLAX COOLER (E.S.P)	12.56	421.00	11.55	137.65	24.1		0.260
27.08.2019	FOLAX COOLER (E.S.P)	12.56	412.00	11.21	136.22	25.1		0.278
September'19								
02.09.2019	FOLAX COOLER (E.S.P)	12.56	424.00	14.13	149.10	28.0	25.0	0.300
09.09.2019	FOLAX COOLER (E.S.P)	12.56	415.00	12.40	143.54	24.3		0.280
17.09.2019	FOLAX COOLER (E.S.P)	12.56	421.00	13.79	137.65	26.1		0.260
24.09.2019	FOLAX COOLER (E.S.P)	12.56	412.00	11.90	136.22	21.7		0.278

April'19								
06.04.2019	COAL MILL - 1 (B.F.)	0.33	348	12.29	3.96	13.8	13.8	0.005
10.04.2019	COAL MILL - 1 (B.F.)	0.33	355	12.25	3.94	14.1		0.005
18.04.2019	COAL MILL - 1 (B.F.)	0.33	350	12.74	4.13	13.3		0.005
26.04.2019	COAL MILL - 1 (B.F.)	0.33	358	12.02	3.84	13.8		0.005
May'19								
03.05.2019	COAL MILL - 1 (B.F.)	0.33	348	15.12	4.84	12.5	13.1	0.005
10.05.2019	COAL MILL - 1 (B.F.)	0.33	354	15.86	5.06	13.7		0.006
STOP	COAL MILL - 1 (B.F.)	STOP				0.000		
	COAL MILL - 1 (B.F.)					0.000		
31.05.2019	COAL MILL - 1 (B.F.)	0.33	352	14.34	4.53	13.2		0.005
June'19								
03.06.2019	COAL MILL - 1 (B.F.)	0.33	345.00	15.31	4.90	13.7	14.1	0.006
12.06.2019	COAL MILL - 1 (B.F.)	0.33	349.00	16.16	5.16	14.2		0.006
20.06.2019	COAL MILL - 1 (B.F.)	0.33	347.00	16.56	5.27	13.8		0.006
27.06.2019	COAL MILL - 1 (B.F.)	0.33	351.00	16.08	5.13	14.5		0.006
July '19								
02.07.2019	COAL MILL - 1 (B.F.)	0.33	341.00	16.89	6.31	14.6	14.6	0.008
STOP	COAL MILL - 1 (B.F.)	STOP				0.000		
	COAL MILL - 1 (B.F.)					0.000		
	COAL MILL - 1 (B.F.)					0.000		
August '19								
STOP	COAL MILL - 1 (B.F.)	STOP FULL MONTH						
	COAL MILL - 1 (B.F.)							
	COAL MILL - 1 (B.F.)							
	COAL MILL - 1 (B.F.)							
September '19								
STOP	COAL MILL - 1 (B.F.)	STOP FULL MONTH						
	COAL MILL - 1 (B.F.)							
	COAL MILL - 1 (B.F.)							
	COAL MILL - 1 (B.F.)							
April'19								
06.04.2019	COAL MILL - 2 (B.F.)	0.38	344	13.53	5.01	17.1	15.9	0.007
10.04.2019	COAL MILL - 2 (B.F.)	0.38	348	13.31	4.91	13.70		0.006
18.04.2019	COAL MILL - 2 (B.F.)	0.38	350	13.05	4.80	17.2		0.007
26.04.2019	COAL MILL - 2 (B.F.)	0.38	352	13.49	4.91	15.5		0.007
May'19								
03.05.2019	COAL MILL - 2 (B.F.)	0.38	353	13.13	4.84	15.4	14.6	0.006
08.05.2019	COAL MILL - 2 (B.F.)	0.38	352	13.47	4.95	14.5		0.006
16.05.2019	COAL MILL - 2 (B.F.)	0.38	351	13.15	4.83	14.7		0.006
22.05.2019	COAL MILL - 2 (B.F.)	0.38	354	13.05	4.78	13.8		0.006
28.05.2019	COAL MILL - 2 (B.F.)	0.38	357	13.72	5.00	14.8		0.006
June'19								
STOP	COAL MILL - 2 (B.F.)	STOP FULL MONTH						
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							
July '19								
STOP	COAL MILL - 2 (B.F.)	STOP FULL MONTH						
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							
August '19								
STOP	COAL MILL - 2 (B.F.)	STOP FULL MONTH						
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							
September '19								
STOP	COAL MILL - 2 (B.F.)	STOP FULL MONTH						
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							
	COAL MILL - 2 (B.F.)							

April'19								
06.04.2019	COAL MILL - 3 (B.F.)	0.38	351	12.94	4.79	14.7	14.7	0.006
10.04.2019	COAL MILL - 3 (B.F.)	0.38	353	13.19	4.85	14.4		0.006
18.04.2019	COAL MILL - 3 (B.F.)	0.38	355	12.65	4.62	15.0		0.006
26.04.2019	COAL MILL - 3 (B.F.)	0.38	358	13.63	4.96	14.8		0.006
May'19								
STOP	COAL MILL - 3 (B.F.)	STOP					14.2	0.000
	COAL MILL - 3 (B.F.)							0.000
	COAL MILL - 3 (B.F.)							0.000
	COAL MILL - 3 (B.F.)							0.000
28.05.2019	COAL MILL - 3 (B.F.)	0.38	335	16.31	5.94	14.2		0.007
June'19								
04.06.2019	COAL MILL - 3 (B.F.)	0.38	342.00	17.14	6.34	14.3	14.9	0.008
13.06.2019	COAL MILL - 3 (B.F.)	0.38	340.00	17.54	6.47	14.8		0.008
20.06.2019	COAL MILL - 3 (B.F.)	0.38	345.00	16.98	6.24	15.0		0.008
27.06.2019	COAL MILL - 3 (B.F.)	0.38	347.00	16.03	5.89	15.5		0.008
July'19								
03.07.2019	COAL MILL - 3 (B.F.)	0.38	341.00	16.89	6.31	15.0	14.3	0.008
09.07.2019	COAL MILL - 3 (B.F.)	0.38	343.00	17.17	6.40	14.2		0.008
16.07.2019	COAL MILL - 3 (B.F.)	0.38	345.00	16.95	6.31	14.7		0.008
28.07.2019	COAL MILL - 3 (B.F.)	0.38	344.00	17.64	6.55	13.3		0.008
August'19								
02.08.2019	COAL MILL - 3 (B.F.)	0.38	344.00	17.33	6.46	12.30	12.3	0.007
12.08.2019	COAL MILL - 3 (B.F.)	0.38	348.00	16.47	6.16	10.70		0.006
21.08.2019	COAL MILL - 3 (B.F.)	0.38	341.00	17.79	6.65	13.70		0.008
28.08.2019	COAL MILL - 3 (B.F.)	0.38	349.00	17.30	6.49	12.30		0.007
September'19								
03.09.2019	COAL MILL - 3 (B.F.)	0.38	342.00	15.83	5.94	15.1	13.7	0.008
10.09.2019	COAL MILL - 3 (B.F.)	0.38	346.00	15.44	5.77	16.2		0.008
16.09.2019	COAL MILL - 3 (B.F.)	0.38	351.00	16.95	6.42	10.5		0.006
23.09.2019	COAL MILL - 3 (B.F.)	0.38	343.00	15.89	6.00	12.8		0.007
April'19								
06.04.2019	COAL MILL - 4 (BAG FILTER)	1.13	354	13.00	14.31	12.9	13.3	0.016
10.04.2019	COAL MILL - 4 (BAG FILTER)	1.13	358	12.75	13.94	11.9		0.014
18.04.2019	COAL MILL - 4 (BAG FILTER)	1.13	360	13.16	14.30	15.0		0.019
26.04.2019	COAL MILL - 4 (BAG FILTER)	1.13	359	13.60	14.68	13.2		0.017
May'19								
STOP	COAL MILL - 4 (BAG FILTER)	STOP					12.4	0.000
	COAL MILL - 4 (BAG FILTER)							0.000
	COAL MILL - 4 (BAG FILTER)							0.000
	COAL MILL - 4 (BAG FILTER)							0.000
28.05.2019	COAL MILL - 4 (BAG FILTER)	1.13	355	12.96	14.03	12.4		0.015
June'19								
04.06.2019	COAL MILL - 4 (BAG FILTER)	1.13	347.00	12.53	13.74	13.6	13.2	0.016
13.06.2019	COAL MILL - 4 (BAG FILTER)	1.13	346.00	12.64	13.82	13.4		0.016
20.06.2019	COAL MILL - 4 (BAG FILTER)	1.13	353.00	13.08	14.39	12.9		0.016
27.06.2019	COAL MILL - 4 (BAG FILTER)	1.13	351.00	13.30	14.59	13.0		0.016
July'19								
03.07.2019	COAL MILL - 4 (BAG FILTER)	1.13	341.00	16.89	6.31	14.6	13.9	0.018
09.07.2019	COAL MILL - 4 (BAG FILTER)	1.13	343.00	17.17	6.40	13.3		0.016
16.07.2019	COAL MILL - 4 (BAG FILTER)	1.13	345.00	16.95	6.31	13.8		0.017
28.07.2019	COAL MILL - 4 (BAG FILTER)	1.13	344.00	17.64	6.55	13.8		0.017
August'19								
06.08.2019	COAL MILL - 4 (BAG FILTER)	1.13	348.00	12.68	14.05	13.90	14.8	0.017
12.08.2019	COAL MILL - 4 (BAG FILTER)	1.13	352.00	14.24	15.77	15.30		0.021
21.08.2019	COAL MILL - 4 (BAG FILTER)	1.13	354.00	13.37	14.86	15.40		0.020
27.08.2019	COAL MILL - 4 (BAG FILTER)	1.13	346.00	13.58	15.09	14.60		0.019
September'19								
03.09.2019	COAL MILL - 4 (BAG FILTER)	1.13	355.00	13.34	14.83	13.3	12.9	0.017
10.09.2019	COAL MILL - 4 (BAG FILTER)	1.13	348.00	13.51	15.11	14.6		0.019
16.09.2019	COAL MILL - 4 (BAG FILTER)	1.13	352.00	15.75	17.62	11.3		0.017
23.09.2019	COAL MILL - 4 (BAG FILTER)	1.13	344.00	14.36	16.01	12.5		0.017

April'19								
04.04.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	378	14.29	3.76	15.8	17.2	0.005
12.04.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	382	14.01	3.66	17.2		0.005
19.04.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	385	14.27	3.70	18.2		0.006
27.04.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	394	13.96	3.60	17.7		0.006
May'19								
01.05.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	386	14.82	3.87	17.7	16.5	0.006
08.05.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	392	15.23	3.97	15.0		0.005
17.05.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	387	14.49	3.79	16.9		0.006
24.05.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	395	16.38	4.25	16.9		0.006
31.05.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	396	16.81	4.36	16.2		0.006
June'19								
04.06.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	368.00	13.87	3.62	15.9	16.1	0.005
14.06.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	374.00	14.24	3.73	16.2		0.005
21.06.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	372.00	14.64	3.84	15.6		0.005
28.06.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	377.00	14.14	3.71	16.8		0.005
July'19								
02.07.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	372.00	14.20	3.76	14.7	15.3	0.006
08.07.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	371.00	14.03	3.71	15.0		0.006
18.07.2019	CEMENT MILL - 1 (BAG FILTER)	0.27	374.00	14.68	3.90	15.5		0.006
STOP	CEMENT MILL - 1 (BAG FILTER)	STOP						0.000
August'19								
STOP	CEMENT MILL - 1 (BAG FILTER) CEMENT MILL - 1 (BAG FILTER) CEMENT MILL - 1 (BAG FILTER) CEMENT MILL - 1 (BAG FILTER) CEMENT MILL - 1 (BAG FILTER)	STOP FULL MONTH						
September'19								
STOP	CEMENT MILL - 1 (BAG FILTER) CEMENT MILL - 1 (BAG FILTER) CEMENT MILL - 1 (BAG FILTER) CEMENT MILL - 1 (BAG FILTER)	STOP FULL MONTH						
April'19								
04.04.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	375	18.54	5.78	11.3	13.6	0.006
12.04.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	384	20.52	6.35	14.5		0.008
19.04.2019	CEMENT MILL - 2 (BAG FILTER)	STOP						0.000
27.04.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	395	21.14	6.44	15.0		0.008
May'19								
03.05.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	378	14.96	4.63	15.1	14.2	0.006
08.05.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	385	17.82	5.50	13.5		0.006
15.05.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	392	18.35	5.68	14.0		0.007
23.05.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	391	17.19	5.29	13.6		0.006
28.05.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	394	17.13	5.27	14.9		0.007
June'19								
04.06.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	361.00	13.84	4.29	14.3	14.7	0.005
13.06.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	368.00	14.08	4.37	14.5		0.005
21.06.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	366.00	13.37	4.15	15.1		0.005
28.06.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	362.00	13.61	4.24	14.8		0.005
July'19								
02.07.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	364.00	13.34	4.20	14.5	14.6	0.005
09.07.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	366.00	12.90	4.05	15.1		0.005
18.07.2019	CEMENT MILL - 2 (BAG FILTER)	0.32	371.00	13.41	4.21	14.2		0.005
STOP	CEMENT MILL - 2 (BAG FILTER)	STOP						0.000
August'19								
STOP	CEMENT MILL - 2 (BAG FILTER) CEMENT MILL - 2 (BAG FILTER) CEMENT MILL - 2 (BAG FILTER) CEMENT MILL - 2 (BAG FILTER)	STOP FULL MONTH						
September'19								
STOP	CEMENT MILL - 2 (BAG FILTER) CEMENT MILL - 2 (BAG FILTER) CEMENT MILL - 2 (BAG FILTER) CEMENT MILL - 2 (BAG FILTER)	STOP FULL MONTH						

April'19								
04.04.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	378	15.53	6.65	12.9	15.3	0.007
12.04.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	382	17.35	7.39	14.1		0.009
19.04.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	388	17.00	7.19	13.6		0.008
27.04.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	393	17.28	7.24	20.5		0.013
May'19								
03.05.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	383	16.18	6.89	14.3	15.9	0.009
07.05.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	385	16.62	7.05	16.8		0.010
16.05.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	389	17.53	7.46	16.5		0.011
25.05.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	394	17.86	7.55	16.6		0.011
28.05.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	395	17.32	7.33	15.2		0.010
June'19								
04.06.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	366.00	14.91	6.35	16.5	16.2	0.009
12.06.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	368.00	15.81	6.75	16.8		0.010
21.06.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	374.00	14.09	6.02	15.3		0.008
28.06.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	372.00	15.17	6.48	16.2		0.009
July'19								
02.07.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	370.00	14.41	6.22	15.8	15.7	0.006
08.07.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	372.00	13.54	5.82	15.1		0.005
19.07.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	368.00	13.92	6.00	14.3		0.005
25.07.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	375.00	14.26	6.11	17.4		0.006
August'19								
02.08.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	STOP				14.2	0.000
12.08.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	372	13.54	5.82	14.2		0.005
21.08.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	365	13.92	6.00	14.5		0.005
28.08.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	368	14.26	6.11	13.9		0.005
September'19								
03.09.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	374.00	14.41	6.22	13.5	15.3	0.005
11.09.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	372.00	13.54	5.82	17.0		0.006
20.09.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	365.00	13.92	6.00	15.9		0.006
25.09.2019	CEMENT MILL - 3 (BAG FILTER)	0.44	368.00	14.26	6.11	14.6		0.005
April'19								
04.04.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	380	14.30	7.94	13.5	14.4	0.009
12.04.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	382	14.24	7.85	12.6		0.009
19.04.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	391	14.20	7.78	16.7		0.011
27.04.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	395	14.69	7.97	14.9		0.010
May'19								
STOP	CEMENT MILL - 4 (BAG FILTER)	STOP					15.6	0.000
	CEMENT MILL - 4 (BAG FILTER)							0.000
	CEMENT MILL - 4 (BAG FILTER)							0.000
20.05.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	380	15.43	8.45	16.2		0.012
27.05.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	375	12.44	6.82	14.9	0.009	
June'19								
08.06.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	367.00	13.75	7.58	16.5	16.0	0.011
STOP	CEMENT MILL - 4 (BAG FILTER)	0.00	273.00	0.00	0.00	0.0		0.000
20.06.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	370.00	14.61	8.08	15.4		0.011
28.06.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	364.00	14.91	8.25	16.0		0.011
July '19								
06.07.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	365.00	13.20	7.38	16.1	15.3	0.011
10.07.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	374.00	12.87	7.21	14.6		0.010
16.07.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	378.00	14.27	7.95	15.0		0.011
25.07.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	372.00	14.00	7.80	15.4		0.011
August'19								
03.08.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	373.00	13.20	7.8	16.8	16.0	0.011
12.08.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	372.00	12.87	8.4	15.6		0.011
22.08.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	368.00	14.27	8.0	14.9		0.010
29.08.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	375.00	14.00	8.66	16.6		0.012
September '19								
05.09.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	371.00	13.20	3.89	15.5	16.2	0.011
12.09.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	365.00	12.87	4.09	19.1		0.013
20.09.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	375.00	14.27	4.25	14.3		0.011
27.09.2019	CEMENT MILL - 4 (BAG FILTER)	0.57	368.00	14.00	3.95	15.7		0.010

J.K. Cement WORKS, NIMBAHERA (RAJ)
AMBIENT AIR QUALITY AVERAGE SPM RESULTS
 (ALL VALUES IN MICROGRAMS / CUBIC METER)
HALF YEARLY REPORT (April - Sept '19)
FY (2019-20)

S.No.	LOCATION	Month	Parameters					
			SPM	PM10	PM2.5	SO2	NOx	CO
1	NEAR MAIN SECURITY GATE	April	413	71.37	49.40	13.36	24.50	720
2		May	414	71.56	49.37	13.83	24.39	804
3		June	415	72.74	50.20	14.04	24.75	800
4		July	248	36.79	22.40	9.41	22.59	433
5		August	206	27.76	17.11	7.86	18.65	465
6		September	203	27.30	17.30	11.00	19.80	671
Half Yearly Average			316.6	51.3	34.3	11.6	22.4	648.7
1	NEAR NEW J.K. FACTORY GATE	April	358	54.16	38.65	14.63	25.57	788
2		May	362	54.61	41.43	14.02	24.85	726
3		June	365	57.88	42.54	13.35	24.11	745
4		July	261	43.60	31.65	10.51	21.61	368
5		August	246	37.01	27.38	9.12	19.36	346
6		September	241	28.90	21.90	9.40	18.90	585
Half Yearly Average			305.5	46.0	33.9	11.8	22.4	593.1
1	NEAR MINE GATE	April	367	56.34	39.25	14.51	24.44	823
2		May	372	58.35	40.82	14.77	25.98	774
3		June	380	64.74	43.77	14.49	25.72	774
4		July	264	47.28	34.04	10.80	22.96	504
5		August	258	44.56	25.04	9.28	21.41	499
6		September	262	29.40	26.20	10.00	21.40	536
Half Yearly Average			317.2	50.1	34.9	12.3	23.7	651.5
1	NEAR THERMAL POWER PLANT GATE	April	322	48.54	36.27	10.80	23.65	678
2		May	324	49.11	36.63	10.92	23.50	732
3		June	327	51.49	37.26	11.20	24.06	733
4		July	311	57.28	34.97	11.23	23.56	420
5		August	284	44.03	26.99	9.82	19.47	442
6		September	298	35.00	29.80	11.70	19.00	654
Half Yearly Average			311.0	47.6	33.7	10.9	22.2	609.9

J.K. Cement WORKS, Nimbahera (RAJ)
Noise Monitoring Report
 (All Values in dB)

Month	HALF YEARLY REPORT (April - Sept '19) FY 2019-20							
	Main Security Gate		Thermal Power Plant		New JK Factory Gate		Mines Office	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	68.2	57.2	69.8	56.5	67.9	56.2	68.1	55.8
May-19	68.5	56.8	69.9	56.9	68.2	56.6	67.9	57.2
Jun-19	67.8	57.5	69.5	55.7	68.2	56.8	67.6	56.2
Jul-19	65.8	56.2	68.9	57.1	67.2	56.9	68.1	55.8
Aug-19	64.9	55.8	67.3	56.7	66.5	56.3	67.6	54.2
Sep-19	65.5	56.4	68.7	57.8	68.2	57.9	66.8	55.8
Average	66.8	56.7	69.0	56.8	67.7	56.8	67.7	55.8

J.K. Cement WORKS, Nimbahera (RAJ)

Treated Domestic Effluent Analysis Report

HALF YEARLY REPORT (April - Sept '19)

S.No.	PARAMETER	Standards	April-19	May-19	June-19	July-19	August-19	September-19
1	pH	Between 5.5 to 9.0	7.40	7.22	7.87	7.70	7.80	7.45
2	Total Suspended solids	Not to exceed 100 mg/l	51.0	48.0	5.6	9.6	5.4	10.8
3	Chemical Oxygen Demand	Not to exceed 250 mg/l	47.0	51.0	12	17.0	9.2	24
4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	9.30	9.90	2.8	4.60	2.00	6.1
5	Oil & Grease	Not to exceed 10 mg/l	2.0	2.0	<1.4	<2.0	<1.4	<2.0
6	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	3.80	3.95	<0.1	<0.10	<0.1	<0.1
7	Sulphide (as S)	Not to exceed 2.0 mg/l	0.72	0.76	<0.1	<0.10	<0.1	<2.0
8	Chlorides	Not to exceed 1000 mg/l	69.0	63.0	181	162.0	60.0	171
9	Total Kjeldahl Nitrogen (as N)	Not to exceed 100 mg/l	3.75	3.60	0.88	0.95	0.76	0.8
10	Residual Chlorine	Not to exceed 1.0 mg/l	NIL	NIL	<0.1	<0.1	<0.1	<0.1

J.K. Cement Works, Nimbahera
Fugitive Emission Monitoring Report
April '2019 - September '2019

S.No.	Month/Year	SPM ($\mu\text{g}/\text{m}^3$)			
		NEAR COAL YARD-1	NEAR LIMESTONE CRUSHING SITE-1	NEAR STACKER RECLAIMER-1	NEAR GYPSUM YARD-1
1	Apr-19	1455.1	2861.3	2505.6	2715.4
2	May-19	1349.6	2749.9	2111.6	2158.6
3	Jun-19	1304.8	2537.1	2472.4	2914.9
4	Jul-19	1338.7	2546.1	2208.8	2205.9
5	Aug-19	1367.7	2425.4	2283.7	2442.1
6	Sep-19	1250.8	2341.7	2217.5	2066.9

J.K. Cement WORKS, Nimbahera (RAJ)
22 MW CPP Fugitive Emission Monitoring Report
April '2019 - September '2019
 (ALL VALUES IN MICROGRAMS / CUBIC METER)

Month/Year	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19
NEAR COAL YARD OF 22 MW CPP	1404.71	1433.41	1463.66	1557.85	1306.29	1242.72

J.K. Cement WORKS, Nimbahera (RAJ)

22 MW THERMAL POWER PLANT

Outlet of Power Plant

(April '2019 - September ' 2019)

S.No.	PARAMETERS/MONTH	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19
1	pH	7.60	7.35	7.38	7.20	6.84	7.35
2	Total Suspended Solids (TSS)	50	53	<2.5	5.5	5.8	7.2
3	Bio-Chemical Oxygen Demand (BOD) (3 Days at 27 deg C)	9.1	9.6	<2.0	4.7	2.4	5.9
4	Chemical Oxygen Demand (COD)	51	55	<4.0	19	12	24
5	Oil & Grease	<1.4	<1.6	<1.4	<1.2	<1.4	<1.1
6	Chlorides	116	108	121	118	54	122
7	Sulphate	62	66	50	46	<1.0	49
8	Temperature	4°C higher than the intake water temperature	4°C higher than the intake water temperature	04 °C Higher than the intake water	4°C higher than the intake water temperature	04 °C Higher than the intake water	4°C higher than the intake water temperature
9	Iron (Total)	0.2	0.2	0.07	0.05	0.73	0.04
10	Copper (total)	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02
11	Phosphate (as PO ₄)	3	3.1	0.66	1.2	0.4	1.6
12	Zinc (as Zn)	<0.02	<0.01	<0.02	<0.02	<0.02	<0.01
13	Chromium (total)	0.05	0.03	<0.01	<0.02	<0.01	<0.04
14	Total Residual Chlorine	NIL	NIL	<0.1	<0.1	<0.1	<0.1
15	Free available chlorine	<0.1	<0.1	<0.1	<0.01	<0.1	<0.01

J.K. Cement WORKS, Nimbahera (RAJ)

22 MW THERMAL POWER PLANT

Stack monitoring results (April '2019 - September '2019)

S.No.	Location/Month	SPM (Mg/Nm3)					
		Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19
1	Stack attached with Boiler	33.0	36.0	28.7	33.0	27.0	36.0
2	Stack attached with Coal Handling system	13.5	15.4	15.9	14.4	13.7	12.1
3	Stack attached with Coal transfer point	14.6	13.8	13.5	13.8	14.5	14.0

J.K. Cement WORKS, Nimbahera (RAJ)

Noise Monitoring Report

(April-19 to Sept-19)

(ALL VALUES IN dB)

Month	22 MW CPP		13.2 MW WHR	
	Day	Night	Day	Night
Apr-19	65.3	54.8	66.2	55.8
May-19	66.5	55.2	67.4	56.5
Jun-19	67.2	57.7	65.4	54.3
Jul-19	66.8	56.2	64.8	53.8
Aug-19	65.9	55.1	66.2	55.9
Sep-19	67.5	57.4	67.3	56.1

J.K. Cement WORKS,Nimbahera (RAJ)
13.2 MW WASTE HEAT RECOVERY PLANT
Outlet of Waste heat recovery plant
(April '2019 - September ' 2019)

[illegible]

Mitra S.K. Private Limited

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TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/893

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/00698

Sample Description : Ambient Air

Sampling Location : Near Main Security Gate

Date of Sampling : 08/09.08.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	42	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	22	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	8.6	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	26.5	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.79	IS 5182 :(Part-10) :1999

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

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/894

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/00699

Sample Description : Ambient Air

Sampling Location : Near Thermal Power Plant

Date of Sampling : 08/09.08.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	48	IS: 5182:(Part-23)-2006
2	Particulate matter (PM _{2.5}) in µg/m ³	60	36	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide (SO ₂) in µg/m ³	80	8.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	29.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	0.88	IS 5182 :(Part-10) :1999

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

Report Prepared By

For Mitra S. K. Pvt. Ltd.
Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/896

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/00701

Sample Description : Ambient Air

Sampling Location : Near Mine Gate

Date of Sampling : 08/09.08.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	54	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in µg/m ³	60	32	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in µg/m ³	80	7.6	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	28.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	0.84	IS 5182 :(Part-10) :1999

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

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/895

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/00700

Sample Description : Ambient Air

Sampling Location : Near New J.K.Factory Gate

Date of Sampling : 08/09.08.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	46	IS: 5182:(Part-23)-2006
2	Particulate matter (PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	31	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide (SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	25.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.70	IS 5182 :(Part-10) :1999

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

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/901

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01382

Sample Description : Fugitive Air

Sampling Location : Near Limestone Crushing Site

Date of Sampling : 13.08.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1250.0	IS 5182 (Part-4) - 1999

Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/902

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01383

Sample Description : Fugitive Air

Sampling Location : Near Coal Yeard (Cement Plant)

Date of Sampling : 13.08.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1375.0	IS 5182 (Part-4) - 1999

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/903

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01384

Sample Description : Fugitive Air

Sampling Location : Near Coal Yeard (Power Plant)

Date of Sampling : 14.08.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1410.0	IS 5182 (Part-4) - 1999

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/904

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01385

Sample Description : Fugitive Air

Sampling Location : Near Gypsum Yeard

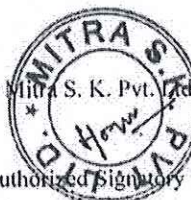
Date of Sampling : 14.08.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1180.0	IS 5182 (Part-4) - 1999


Report Prepared By

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

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TEST REPORT

Name & Address of the Customer :

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Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/905

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01386

Sample Description : Fugitive Air

Sampling Location : Near Stacker Reclaimer

Date of Sampling : 13.08.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1335.0	IS 5182 (Part-4) - 1999

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/906

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01387

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 04.00 P.M

Sampling Location : Cement Mill No. 02

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of clinker	
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	: 0.75 m	
3. Area of Stack	: 0.44 m ²	
C. Results of sampling & analysis of gaseous emission	Result	Method
1. Temperature of emission (°C)	: 90	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 11.65	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 :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/908

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01389

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 05.00 P.M

Sampling Location : Cement Mill No. 04

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of clinker	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 0.75 m	
3. Area of Stack	: 0.44 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 92	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 12.53	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 15.0	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report prepared by :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/907

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01388

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 08.00 P.M

Sampling Location : Cement Mill No. 3

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of clinker	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
<u>B. Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 0.75 m	
3. Area of Stack	: 0.44 m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 92	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 11.37	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 11.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/909

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01390

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 02.00 p.m

Sampling Location : Coal Mill - 3

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	: Coal mill	
2. Emission due to	: Grinding of coal	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
<u>B. Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 43.50 m	
2. Diameter of the Stack at sampling point	: 0.70 m	
3. Area of Stack	: 0.385 m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 75	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 13.76	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 19.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/910

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01391

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 3.00 P.M

Sampling Location : Coal Mill - 4

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Coal mill	
2. Emission due to	: Grinding of coal	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 30.50 m	
2. Diameter of the Stack at sampling point	: 1.20 m	
3. Area of Stack	: 1.13 m ²	
C. Results of sampling & analysis of gaseous emission		
1. Temperature of emission (°C)	Result : 77	Method : EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 13.95	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 16.8	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack		: Bag filter
E. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/911

Date: 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01392

Sample Description : Stack Emission

Date & Time of Sampling: 08.08.2019 at 11.00 A.M

Sampling Location : Crusher

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Lime Stone Crusher	
2. Emission due to	: Lime Stone 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	: 0.57 m	
3. Area of Stack	: 0.2553 m ²	
C. Results of sampling & analysis of gaseous emission	Result	Method
1. Temperature of emission (°C)	: 35	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 8.33	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:



Mitra S.K. Private Limited

Shrachi Center (5th Floor)
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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/912

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01406

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 09.00 A.M

Sampling Location : Kiln- 03

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Kiln-03	
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	: 65.50 m	
2. Diameter of the Stack at sampling point	: 2.20 m	
3. Area of Stack	: 3.80 m ²	
C. Results of sampling & analysis of gaseous emission	Result	Method
1. Temperature of emission (°C)	: 145	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 15.78	EPA Part 2
4. Concentration of Sulphur di oxide (mg/Nm ³)	: 24.0	EPA Part-6
5. Concentration of Nitrogen di oxide (mg/Nm ³)	: 522.0	EPA Part-7
6. Concentration of Particulate Matters (mg/Nm ³)	: 12.6	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag House	
E. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/913

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01393

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 12.00 P.M

Sampling Location : Clinker Cooler

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Clinker cooler	
2. Emission due to	: Clinker cooler	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 54.65 m	
2. Diameter of the Stack at sampling point	: 4.0 m	
3. Area of Stack	: 12.57 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 97	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 9.1	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 22.4	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack		: Electrostatic Precipitator
E. Remarks : NIL		

Report Prepared by : 



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/914

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01407

Sample Description : Stack Emission

Date & Time of Sampling: 13.08.2019 at 10.30 A.M

Sampling Location : Pre-calcliner

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|---|
| 1. Stack connected to | : Pre-calcliner |
| 2. Emission due to | : Pre-calcination of lime Stone & additives |
| 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 | : 87.90 m |
| 2. Diameter of the Stack at sampling point | : 3.15 m |
| 3. Area of Stack | : 7.79 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) | : 14.14 | EPA Part 2 |
| 4. Concentration of Sulphur di oxide (mg/Nm ³) | : 14.2 | EPA Part-6 |
| 5. Concentration of Nitrogen di oxide (mg/Nm ³) | : 895 | EPA Part-7 |
| 6. Concentration of Particulate Matters (mg/Nm ³) | : 10.6 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works, Nimbahera

Kailash Nagar - 312617

Nimbahera - Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/930

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/01414 to 01417

Sample Description : Noise Monitoring

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

ANALYSIS RESULT

Sl. No.	Sampling Date	Sampling Location	Results Leq dB(A)	
			Day Time	Night Time
1.	08/09.08.2019	Near Main Security Gate (Nimbahera Plant)	59.2	42.5
2.		Near Thermal Power Plant (Nimbahera Plant)	56.4	44.3
3.		Near New J.K. Factory Gate (Nimbahera Plant)	59.0	44.7
4.		Near Mine Gate (Nimbahera Plant)	60.5	46.2

Report prepared by : 

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works, Nimbahera

Kailash Nagar - 312617

Nimbahera - Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/944

Date : 31.08.2019

Sample No. : MSKGL/ED/2019-20/08/00872

Sample Description : Domestic Waste Water

Sample Location : STP outlet Water

Date of Collection : 16.08.2019

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Result
1.	pH (at 25 ^o C)	---	7.80
2.	Total Suspended solids (TSS)	mg/l	5.4
3.	Chemical Oxygen Demand (COD)	mg/l	9.2
4.	Bio-Chemical Oxygen Demand (3 days at 27 ^o C)	mg/l	2.0
5.	Oil & Grease	mg/l	<1.4
6.	Ammonical Nitrogen (as N)	mg/l	<0.1
7.	Sulphide (as S)	mg/l	<0.1
8.	Chloride	mg/l	60.0
9.	Total Kjeldahl Nitrogen (as N)	mg/l	0.76
10.	Total Residual Chlorine	mg/l	<0.1

Report Prepared by:



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/394

Date: 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01689

Sample Description : Stack Emission

Date & Time of Sampling: 13.06.2019 at 1.00 P.M

Sampling Location : Crusher

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|-----------------------|
| 1. Stack connected to | : Lime Stone Crusher |
| 2. Emission due to | : Lime Stone 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 | : 0.57 m |
| 3. Area of Stack | : 0.2553 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 37 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 735 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 8.0 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 21.0 | EPA Part-5 |

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

Authorized Signatory

Mitra S. K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/417

Date : 10.07.2019

Sample No. : MSKGL/ED/2019-20/06/01667

Sample Description : Stack Emission

Date & Time of Sampling: 11.06.2019 at 09.30 A.M

Sampling Location : Kiln- 01

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|-----------------------------------|
| 1. Stack connected to | : Kiln-01 |
| 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 | : 65.50 m |
| 2. Diameter of the Stack at sampling point | : 2.20 m |
| 3. Area of Stack | : 3.80 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result |
|---|-----------|
| 1. Temperature of emission (°C) | : 143 |
| 2. Barometric pressure (mm of Hg) | : 735 |
| 3. Velocity of gas (m/sec) | : 16.49 |
| 4. Concentration of Sulphur di oxide (mg/Nm ³) | : 17.4 |
| 5. Concentration of Nitrogen di oxide (mg/Nm ³) | : 528.0.0 |
| 6. Concentration of Particulate Matters (mg/Nm ³) | : 9.57 |

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



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/419

Date : 10.07.2019

Sample No. : MSKGL/ED/2019-20/06/01669

Sample Description : Stack Emission

Date & Time of Sampling: 11.06.2019 at 12.15 P.M

Sampling Location : Pre-calcliner

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|--|
| 1. Stack connected to | : Pre-calcliner |
| 2. Emission due to | : Pre-calclination of lime Stone & additives |
| 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 | : 87.90 m |
| 2. Diameter of the Stack at sampling point | : 3.15 m |
| 3. Area of Stack | : 7.79 m ² |

C. Results of sampling & analysis of gaseous emission

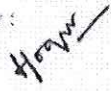
- | | Result |
|---|---------|
| 1. Temperature of emission (°C) | : 100 |
| 2. Barometric pressure (mm of Hg) | : 735 |
| 3. Velocity of gas (m/sec) | : 14.64 |
| 4. Concentration of Sulphur di oxide (mg/Nm ³) | : 11.0 |
| 5. Concentration of Nitrogen di oxide (mg/Nm ³) | : 874.0 |
| 6. Concentration of Particulate Matters (mg/Nm ³) | : 11.10 |

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



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Name & Address of the Customer :

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

TEST REPORT

Report No. : MSK/UDR/2019-20/418

Date : 10.07.2019

Sample No. : MSKGL/ED/2019-20/06/01668

Sample Description : Stack Emission

Date & Time of Sampling: 11.06.2019 at 11.00 A.M

Sampling Location : Kiln- 03

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|-----------------------------------|
| 1. Stack connected to | : Kiln-03 |
| 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 | : 65.50 m |
| 2. Diameter of the Stack at sampling point | : 2.20 m |
| 3. Area of Stack | : 3.80 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> |
|---|---------------|
| 1. Temperature of emission (°C) | : 145 |
| 2. Barometric pressure (mm of Hg) | : 735 |
| 3. Velocity of gas (m/sec) | : 16.4 |
| 4. Concentration of Sulphur di oxide (mg/Nm ³) | : 19.0 |
| 5. Concentration of Nitrogen di oxide (mg/Nm ³) | : 546.0 |
| 6. Concentration of Particulate Matters (mg/Nm ³) | : 10.09 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :




Mitra S. K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/387

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01682

Sample Description : Stack Emission

Date & Time of Sampling: 11.06.2019 at 1.30 P.M

Sampling Location : Clinker Cooler

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Clinker cooler	
2. Emission due to	: Clinker cooler	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 40.90 m	
2. Diameter of the Stack at sampling point	: 4.0 m	
3. Area of Stack	: 12.57 m ²	
C. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 97	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)	: 17.0	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack		: Electrostatic Precipitator
E. Remarks : NIL		

Report Prepared by :



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/388

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01683

Sample Description : Stack Emission

Date & Time of Sampling: 12.06.2019 at 09.30 A.M

Sampling Location : Coal Mill - 01

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	: Coal mill	
2. Emission due to	: Grinding of coal	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
<u>B. Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 43.50 m	
2. Diameter of the Stack at sampling point	: 0.70 m	
3. Area of Stack	: 0.385 m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 73	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 13.0	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 15.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory

Shrachi Centre (5th Floor)
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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/389

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01684

Sample Description : Stack Emission

Date & Time of Sampling: 12.06.2019 at 11.00 p.m

Sampling Location : Coal Mill - 3

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	: Coal mill	
2. Emission due to	: Grinding of coal	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
<u>B. Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 43.50 m	
2. Diameter of the Stack at sampling point	: 0.70 m	
3. Area of Stack	: 0.385 m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 75	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 14.6	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 17.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by : 

For Mitra S. K. Private Limited

 Authorised Signatory

Shrachi Centre (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/390

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01685

Sample Description : Stack Emission

Date & Time of Sampling: 12.06.2019 at 12.30 P.M

Sampling Location : Coal Mill - 4

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

ANALYSIS RESULT

<u>A. General information about stack</u>		
1. Stack connected to	: Coal mill	
2.Emission due to	: Grinding of coal	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
<u>B. Physical characteristics of stack</u>		
1.Height of the stack from ground level	: 30.50 m	
2.Diameter of the Stack at sampling point	: 1.20 m	
3.Area of Stack	: 1.13 m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1.Temperature of emission (°C)	: 77	EPA Part 2
2.Barometric pressure (mm of Hg)	: 735	EPA Part 2
3.Velocity of gas (m/sec)	: 14.2	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm ³)	: 16.0	EPA Part-5
<u>D. Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory

Mitra S. K. Private Limited



Shrachi Centre (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/391

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01686

Sample Description : Stack Emission

Date & Time of Sampling: 13.06.2019 at 10.00 A.M

Sampling Location : Cement Mill No. 01

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of clinker	
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	: 0.75 m	
3. Area of Stack	: 0.44 m ²	
C. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 90	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 12.8	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
Authorized Signatory

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/392

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01687

Sample Description : Stack Emission

Date & Time of Sampling: 13.06.2019 at 11.30 A.M

Sampling Location : Cement Mill No. 02

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of clinker	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 0.75 m	
3. Area of Stack	: 0.44 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 92	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 12.0	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 14.0	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack		: Bag Filter
E. Remarks : NIL		

Report prepared by :

For Mitra S.K. Private Limited
Authorized Signatory

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/393

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01688

Sample Description : Stack Emission

Date & Time of Sampling: 11.06.2019 at 02.30 P.M

Sampling Location : Cement Mill No. 3

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of clinker	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1. Height of the stack from ground level	: 30.0 m	
2. Diameter of the Stack at sampling point	: 0.75 m	
3. Area of Stack	: 0.44 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 94	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 11.6	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 12.0	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S. K. Private Limited
Authorized Signatory

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/399

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01695

Sample Description : Ambient Air

Sampling Location : Near Main Security Gate

Date of Sampling : 12/13.06.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	83	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in µg/m ³	60	43	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in µg/m ³	80	9.3	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	37.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	0.85	IS 5182 :(Part-10) :1999

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

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/400

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01696

Sample Description : Ambient Air

Sampling Location : Near Thermal Power Plant Gate

Date of Sampling : 12/13.06.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	89	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	47	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	8.7	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	43.2	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.93	IS 5182 :(Part-10) :1999

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

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/401

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01697

Sample Description : Ambient Air

Sampling Location : Near New J.K.Factory Gate

Date of Sampling : 12/13.06.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	84	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	43	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	33.9	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.78	IS 5182 :(Part-10) :1999

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

Report Prepared By


For Mitra S. K. Pvt. Ltd.

Authorized Signatory

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/402

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01698

Sample Description : Ambient Air

Sampling Location : Near Mine Gate

Date of Sampling : 12/13.06.2019

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

AMBIENT AIR QUALITY MONITORING REPORT

Sl. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	86	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	48	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	8.0	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	35.7	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.97	IS 5182 :(Part-10) :1999

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

Report Prepared By


For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S. K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works, Nimbahera

Kailash Nagar – 312617

Nimbahera – Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/409

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01703 to 01706

Sample Description : Noise Monitoring

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

ANALYSIS RESULT

Sl. No.	Sampling Date	Sampling Location	Results Leq dB(A)	
			Day Time	Night Time
1.	12/13.06.2019	Near Main Security Gate (Nimbahera Plant)	52.9	39.0
2.		Near Thermal Power Plant (Nimbahera Plant)	58.7	45.2
3.		Near New J.K. Factory Gate (Nimbahera Plant)	60.1	43.8
4.		Near Mine Gate (Nimbahera Plant)	59.5	40.3

Report prepared by :



Mitra S. K. Private Limited



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/403

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01707

Sample Description : Fugitive Air

Sampling Location : Near Coal Yard (Cement Plant)

Date of Sampling : 12.06.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1746.0	IS 5182 (Part-4) - 1999

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/404

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01708

Sample Description : Fugitive Air

Sampling Location : Near Limestone Crushing Site

Date of Sampling : 13.06.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1601.0	IS 5182 (Part-4) - 1999

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/406

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01710

Sample Description : Fugitive Air

Sampling Location : Near Gypsum Yeard

Date of Sampling : 11.06.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1800.0	IS 5182 (Part-4) - 1999


Report Prepared By



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/405

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01709

Sample Description : Fugitive Air

Sampling Location : Near Stacker Reclaimer

Date of Sampling : 13.06.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1626.0	IS 5182 (Part-4) - 1999

Report Prepared By


For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S. K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2019-20/407

Date : 09.07.2019

Sample No. : MSKGL/ED/2019-20/06/01711

Sample Description : Fugitive Air

Sampling Location : Near Coal Yard (Power Plant)

Date of Sampling : 12.06.2019

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

ANALYSIS RESULT

SL. NO.	Pollutants	Result	Method of Test Reference
1	Suspended Particulate Matter (SPM) in $\mu\text{g}/\text{m}^3$	1794.0	IS 5182 (Part-4) - 1999

Report Prepared By



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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works, Nimbahera

Kailash Nagar – 312617

Nimbahera – Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/362

Date : 05.07.2019

Sample No. : MSKGL/ED/2019-20/06/01409

Sample Description : Domestic Waste Water

Sample Location : STP outlet Water

Date of Collection : 12.06.2019

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Result
1.	pH (at 27 ^o C)	---	7.87
2.	Total Suspended solids (TSS)	mg/l	5.6
3.	Chemical Oxygen Demand (COD)	mg/l	12.0
4.	Bio-Chemical Oxygen Demand (3 days at 27 ^o C)	mg/l	2.8
5.	Oil & Grease	mg/l	<1.4
6.	Ammonical Nitrogen (as N)	mg/l	<0.1
7.	Sulphide (as S)	mg/l	<0.1
8.	Chloride	mg/l	181.0
9.	Total Kjeldahl Nitrogen (as N)	mg/l	0.88
10.	Total Residual Chlorine	mg/l	<0.1

Report Prepared by:

For Mitra S. K. Private Limited



ISSUED TO:

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

Report Number : VLI/VLS/19-20/05737/002
Issued Date : 2019-08-24
Your Ref : 4600058000
And Date : 27/06/2019

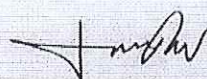
Page 1 of 3

SAMPLE PARTICULARS		Stack Connected to Pre Calciner Bag House		Page 1 of 3
Sample Registration Date	: 2019-08-13	Sample Collection Date	: 2019-08-09	
Analysis Starting Date	: 2019-08-13	Analysis Completion Date	: 2019-08-24	
Test Required	: O ₂ , PM, SO ₂ , NO _x , HCl, HF, CO, CO ₂ and TOC.			
SAMPLE COLLECTED BY VIMTA LABS LTD.				

TEST REPORT

Sr. No.	PARAMETERS	UOM	METHOD OF TESTING	RESULTS	Limits as per MoEF & CC Notification GSR 497(E)
1	Diameter of stack	m	-	3.15	--
2	Flue gas temperature	°C	-	128	--
3	Fuel	-	Coal+ pet coke+ Co-processing of waste		--
4	Oxygen as O ₂	%	Flue Gas Analyzer	9.9	--
5	Velocity	m/sec	-	12.63	--
6	Volumetric flow rate	Nm ³ /Sec	-	70.16	--
7	Particulate Matter	mg/Nm ³	USEPA method-5	15.8	30
8	Sulphur Dioxide	mg/Nm ³	Flue Gas Analyzer	541	100
9	Oxides of Nitrogen	mg/Nm ³	Flue Gas Analyzer	564	1000
10	HCl	mg/Nm ³	USEPA method -26	4.6	10
11	HF	mg/Nm ³	USEPA method -13	0.37	1.0
12	Carbon Monoxide as CO	mg/Nm ³	Flue Gas Analyzer	74	100
13	Carbon dioxide as CO ₂	%	Flue Gas Analyzer	9.4	-
14	TOC	mg/nm ³	USEPA method -40 & MM5(10)	4.7	10

All the Values are represented at 10% O₂


Dr. Subba Reddy Mallampati
Group Leader-Environment

ISSUED TO:

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

Report Number : VLL/VLS/19-20/05737/002
Issued Date : 2019-08-24
Your Ref : 4600058000
And Date : 27/06/2019

SAMPLE PARTICULARS

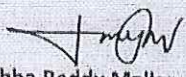
Stack Connected to Pre Calciner Bag House
Sample Registration Date : 2019-08-13 Sample Collection Date : 2019-08-09
Analysis Starting Date : 2019-08-13 Analysis Completion Date : 2019-08-24
Test Required : Hg & its compounds, Cd + Tl its compounds, Sb+ As+ Pb+ Co+ Cr+ Cu+ Mn+ Ni+ V+
Their compounds

SAMPLE COLLECTED BY VIMTA LABS LTD.

TEST REPORT

Sr.No.	PARAMETERS	UOM	METHOD OF TESTING	RESULTS	Limits as per MoEF & CC Notification GSR 497(E)
1	Mercury as Hg + their Compound	mg/Nm ³	USEPA method -29	<0.001	0.05
2	Cadmium + Thallium (Cd + Tl) + their Compound	mg/Nm ³	USEPA method -29	<0.001	0.05
3	Chromium as Cr + their Compound	mg/Nm ³	USEPA method -29	0.019	0.5
4	Manganese as Mn + their Compound	mg/Nm ³	USEPA method -29	0.022	
5	Arsenic as As + their Compound	mg/Nm ³	USEPA method -29	0.021	
6	Antimony as Sb + their Compound	mg/Nm ³	USEPA method -29	0.017	
7	Lead as Pb + their Compound	mg/Nm ³	USEPA method -29	0.014	
8	Cobalt as Co + their Compound	mg/Nm ³	USEPA method -29	0.010	
9	Copper as Cu + their Compound	mg/Nm ³	USEPA method -29	0.012	
10	Nickel as Ni + their Compound	mg/Nm ³	USEPA method -29	0.013	
11	Vanadium as V + their Compound	mg/Nm ³	USEPA method -29	0.011	

Instruments used: GC-FID, ICP-MS, Cold Vapor AAS and GC-MS
All the values are represented at 10% O₂


Dr. Subba Reddy Mallampati
Group Leader-Environment

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CIN : L24110TG1990PLC011977

ISSUED TO:

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

Report Number : VLL/VLS/19-20/05737/002
Issued Date : 2019-08-24
Your Ref : 4600058000
And Date : 27/06/2019

Page 3 of 3

SAMPLE PARTICULARS : Stack Connected to Pre Calciner Bag House

Sample Registration Date : 2019-08-13 Sample Collection Date : 2019-08-09
Analysis Starting Date : 2019-08-13 Analysis Completion Date : 2019-08-24
Test Required : PCDD & PCDF

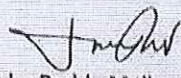
SAMPLE COLLECTED BY VIMTA LABS LTD.

TEST REPORT

Sr.No.	PARAMETERS	UOM	RESULTS
EMISSION RATES			
1	Diameter of the Stack	m	3.15
2	Temperature	°C	128
3	Velocity	m/sec	12.63
4	Volumetric flow rate	Nm ³ /Sec	70.16
DIOXIN AND FURANS			
5	2,3,7,8-TCDF	ng/Nm ³ , TEQ	0.0064
6	1,2,3,7,8-PeCDF	ng/Nm ³ , TEQ	0.0055
7	2,3,4,7,8-PeCDF	ng/Nm ³ , TEQ	0.0024
8	1,2,3,4,7,8-HxCDF	ng/Nm ³ , TEQ	0.0028
9	1,2,3,6,7,8-HxCDF	ng/Nm ³ , TEQ	0.0029
10	2,3,4,6,7,8-HxCDF	ng/Nm ³ , TEQ	0.0025
11	1,2,3,7,8,9-HxCDF	ng/Nm ³ , TEQ	0.0047
12	1,2,3,4,6,7,8-HpCDF	ng/Nm ³ , TEQ	0.0075
13	1,2,3,4,7,8,9-HpCDF	ng/Nm ³ , TEQ	0.0012
14	OCDF	ng/Nm ³ , TEQ	0.0035
15	2,3,7,8-TCDD	ng/Nm ³ , TEQ	0.0018
16	1,2,3,7,8-PeCDD	ng/Nm ³ , TEQ	0.0066
17	1,2,3,4,7,8-HxCDD	ng/Nm ³ , TEQ	0.0024
18	1,2,3,6,7,8-HxCDD	ng/Nm ³ , TEQ	0.0000
19	1,2,3,7,8,9-HxCDD	ng/Nm ³ , TEQ	0.0029
20	1,2,3,4,6,7,8-HpCDD	ng/Nm ³ , TEQ	0.0045
21	OCDD	ng/Nm ³ , TEQ	0.0086
Total Furans & Dioxins		ng/Nm ³ , TEQ	0.0662
Total Furans & Dioxins		ng/Nm ³ , TEQ Corrected to 10% O ₂ Concentration	0.0656
Limits as per MoEF & CC Notification GSR 497(E)			0.1

Method of Testing: As per USEPA 23 A & 8290

Instruments used: Auto spec Premier (HRGC/HRMS), Detection Limit: 0.01ng


Dr. Subba Reddy Mallampati
Group Leader-Environment

ISSUED TO:

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

Report Number : VLL/VLS/19-20/05737/001
Issued Date : 2019-08-24
Your Ref : 4600058000
And Date : 27/06/2019

Page 1 of 3

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-3

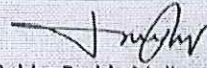
Sample Registration Date : 2019-08-13 Sample Collection Date : 2019-08-09
Analysis Starting Date : 2019-08-13 Analysis Completion Date : 2019-08-24
Test Required : O₂, PM, SO₂, NO_x, HCl, HF, CO, CO₂ and TOC.

SAMPLE COLLECTED BY VIMTA LABS LTD,

TEST REPORT

Sr. No.	PARAMETERS	UOM	METHOD OF TESTING	RESULTS	Limits as per MoEF & CC Notification GSR 497(E)
1	Diameter of stack	m	-	2.2	--
2	Flue gas temperature	°C	-	168	--
3	Fuel	-	Coal+ pet coke+ Co-processing of waste		--
4	Oxygen as O ₂	%	Flue Gas Analyzer	11.0	--
5	Velocity	m/sec	-	12.94	--
6	Volumetric flow rate	Nm ³ /Sec	-	31.88	--
7	Particulate Matter	mg/Nm ³	USEPA method-5	14.9	30
8	Sulphur Dioxide	mg/Nm ³	Flue Gas Analyzer	11.5	100
9	Oxides of Nitrogen	mg/Nm ³	Flue Gas Analyzer	587	1000
10	HCl	mg/Nm ³	USEPA method -26	4.1	10
11	HF	mg/Nm ³	USEPA method -13	0.37	1.0
12	Carbon Monoxide as CO	mg/Nm ³	Flue Gas Analyzer	60.7	100
13	Carbon Dioxide as CO ₂	%	Flue Gas Analyzer	9.9	-
14	TOC	mg/nm ³	USEPA method -40 & MMS(10)	5.2	10

All the Values are represented at 10% O₂


Dr. Subba Reddy Mallampati
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ISSUED TO:

M/S. J.K. CEMENT LIMITED
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DIST: CHITTORGARH, RAJASTHAN-312617,
INDIA.

Report Number : VLL/VLS/19-20/05737/001
Issued Date : 2019-08-24
Your Ref : 4600058000
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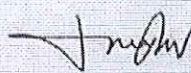
Page 2 of 3

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-3
Sample Registration Date : 2019-08-13 Sample Collection Date : 2019-08-09
Analysis Starting Date : 2019-08-13 Analysis Completion Date : 2019-08-24
Test Required : Hg & its compounds, Cd + Tl its compounds, Sb+ As+ Pb+ Co+ Cr+ Cu+ Mn+ Ni+ V+
Their compounds
SAMPLE COLLECTED BY VIMTA LABS LTD.

TEST REPORT

Sr.No.	PARAMETERS	UOM	METHOD OF TESTING	RESULTS	Limits as per MoEF & CC Notification GSR 497(E)
1	Mercury as Hg + their Compound	mg/Nm ³	USEPA method -29	<0.001	0.05
2	Cadmium + Thallium (Cd + Tl) + their Compound	mg/Nm ³	USEPA method -29	<0.001	0.05
3	Chromium as Cr + their Compound	mg/Nm ³	USEPA method -29	0.021	0.5
4	Manganese as Mn + their Compound	mg/Nm ³	USEPA method -29	0.014	
5	Arsenic as As + their Compound	mg/Nm ³	USEPA method -29	0.011	
6	Antimony as Sb + their Compound	mg/Nm ³	USEPA method -29	0.008	
7	Lead as Pb + their Compound	mg/Nm ³	USEPA method -29	0.014	
8	Cobalt as Co + their Compound	mg/Nm ³	USEPA method -29	0.011	
9	Copper as Cu + their Compound	mg/Nm ³	USEPA method -29	0.013	
10	Nickel as Ni + their Compound	mg/Nm ³	USEPA method -29	0.014	
11	Vanadium as V + their Compound	mg/Nm ³	USEPA method -29	0.012	

Instruments used: GC-FID, ICP-MS, Cold Vapor AAS and GC-MS
All the values are represented at 10% D₂


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**ISSUED TO:**

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Unit: - J.K. CEMENT WORKS
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Report Number : VII/VIS/19-20/05737/001
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Page 3 of 3

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-3

Sample Registration Date	: 2019-08-13	Sample Collection Date	: 2019-08-09
Analysis Starting Date	: 2019-08-13	Analysis Completion Date	: 2019-08-24
Test Required	: PCDD & PCDF		

SAMPLE COLLECTED BY VIMTA LABS LTD.

TEST REPORT

Sr.No.	PARAMETERS	UOM	RESULTS
EMISSION RATES			
1	Diameter of the Stack	m	2.2
2	Temperature	°C	168
3	Velocity	m/sec	12.94
4	Volumetric flow rate	Nm ³ /Sec	31.88
DIOXIN AND FURANS			
5	2,3,7,8-TCDF	ng/Nm ³ , TEQ	0.0059
6	1,2,3,7,8-PeCDF	ng/Nm ³ , TEQ	0.0051
7	2,3,4,7,8-PeCDF	ng/Nm ³ , TEQ	0.0025
8	1,2,3,4,7,8-HxCDF	ng/Nm ³ , TEQ	0.0026
9	1,2,3,6,7,8-HxCDF	ng/Nm ³ , TEQ	0.0029
10	2,3,4,6,7,8-HxCDF	ng/Nm ³ , TEQ	0.0022
11	1,2,3,7,8,9-HxCDF	ng/Nm ³ , TEQ	0.0039
12	1,2,3,4,6,7,8-HpCDF	ng/Nm ³ , TEQ	0.0067
13	1,2,3,4,7,8,9-HpCDF	ng/Nm ³ , TEQ	0.0012
14	OCDF	ng/Nm ³ , TEQ	0.0029
15	2,3,7,8-TCDD	ng/Nm ³ , TEQ	0.0013
16	1,2,3,7,8-PeCDD	ng/Nm ³ , TEQ	0.0059
17	1,2,3,4,7,8-HxCDD	ng/Nm ³ , TEQ	0.0026
18	1,2,3,6,7,8-HxCDD	ng/Nm ³ , TEQ	0.0000
19	1,2,3,7,8,9-HxCDD	ng/Nm ³ , TEQ	0.0022
20	1,2,3,4,6,7,8-HpCDD	ng/Nm ³ , TEQ	0.0036
21	OCDD	ng/Nm ³ , TEQ	0.0069
Total Furans & Dioxins		ng/Nm ³ , TEQ	0.0584
Total Furans & Dioxins		ng/Nm ³ , TEQ Corrected to 10% O ₂ Concentration	0.0643
Limits as per MoEF & CC Notification GSR 497(E)			0.1

Method of Testing: As per USEPA 23 A & 8290

Instruments used: Auto spec Premier (HRGC/HRMS): Detection Limit: 0.01ng

Dr. Subba Reddy Mallampati
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**ISSUED TO:**

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Report Number : VIL/VIS/19-20/05737/001
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Page 3 of 3

SAMPLE PARTICULARS : Stack Connected to Bag House Kiln-3

Sample Registration Date : 2019-08-13 Sample Collection Date : 2019-08-09
Analysis Starting Date : 2019-08-13 Analysis Completion Date : 2019-08-24
Test Required : PCDD & PCDF

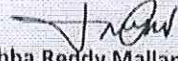
SAMPLE COLLECTED BY VIMTA LABS LTD.

TEST REPORT

Sr.No.	PARAMETERS	UOM	RESULTS
EMISSION RATES			
1	Diameter of the Stack	m	2.2
2	Temperature	°C	168
3	Velocity	m/sec	12.94
4	Volumetric flow rate	Nm ³ /Sec	31.88
DIOXIN AND FURANS			
5	2,3,7,8-TCDF	ng/Nm ³ , TEQ	0.0059
6	1,2,3,7,8-PeCDF	ng/Nm ³ , TEQ	0.0051
7	2,3,4,7,8-PeCDF	ng/Nm ³ , TEQ	0.0025
8	1,2,3,4,7,8-HxCDF	ng/Nm ³ , TEQ	0.0026
9	1,2,3,6,7,8-HxCDF	ng/Nm ³ , TEQ	0.0029
10	2,3,4,6,7,8-HxCDF	ng/Nm ³ , TEQ	0.0022
11	1,2,3,7,8,9-HxCDF	ng/Nm ³ , TEQ	0.0039
12	1,2,3,4,6,7,8-HpCDF	ng/Nm ³ , TEQ	0.0067
13	1,2,3,4,7,8,9-HpCDF	ng/Nm ³ , TEQ	0.0012
14	OCDF	ng/Nm ³ , TEQ	0.0029
15	2,3,7,8-TCDD	ng/Nm ³ , TEQ	0.0013
16	1,2,3,7,8-PeCDD	ng/Nm ³ , TEQ	0.0059
17	1,2,3,4,7,8-HxCDD	ng/Nm ³ , TEQ	0.0026
18	1,2,3,6,7,8-HxCDD	ng/Nm ³ , TEQ	0.0000
19	1,2,3,7,8,9-HxCDD	ng/Nm ³ , TEQ	0.0022
20	1,2,3,4,6,7,8-HpCDD	ng/Nm ³ , TEQ	0.0036
21	OCDD	ng/Nm ³ , TEQ	0.0069
Total Furans & Dioxins		ng/Nm ³ , TEQ	0.0584
Total Furans & Dioxins		ng/Nm ³ , TEQ Corrected to 10% O ₂ Concentration	0.0643
Limits as per MoEF & CC Notification GSR 497(E)			0.1

Method of Testing: As per USEPA 23 A & 8290

Instruments used: Auto spec Premier (HRGC/HRMS). Detection Limit: 0.01ng


Dr. Subba Reddy Mallampati
Group Leader-Environment

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CIN : L24110TG1990PLC011977

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Mitra S.K. Private Limited

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



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W: www.mitrask.com

TEST REPORT

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

Report No. : MSK/UDR/2019-20/933
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01420
Sample Description : Flue Gas Monitoring
Sampling Location : 22 MW Thermal Power Plant
Date & Time of Sampling : 24.08.2019 at 04.00 P.M

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Boiler	
2. Emission due to	: Power Generation	
3. Material of construction of Stack	: RCC	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
6. Generation Capacity	: 22 MW	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 96.0 m	
2. Diameter of the Stack at sampling point	: 3.88 m	
3. Area of Stack	: 11.82 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)	: 124	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 8.0	EPA Part 2
4. Concentration of Oxygen (% v/v)	: 6.3	IS 13270:1992, Reaf:2014
5. Conc. of Particulate Matters (mg/Nm ³) at 6% O ₂ on dry basis	: 27.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack	: Electrostatic precipitator	
F. Remarks : NIL		

Report Prepared by :



Mitra S.K. Private Limited

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



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TEST REPORT

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

Report No. : MSK/UDR/2019-20/945
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00875
Sample Description : Treated Effluent Water
Sample Location : 22 MW TPP
Date of Collection : 16.08.2019

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27° C)	---	6.5 to 8.5	6.84
2.	Total Suspended solids (TSS)	mg/l	100.0	5.8
3.	Oil & Grease	mg/l	10.0	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.73
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	° C	Shall not exceed 5° C above the receiving water temperature	4° C higher than the intake water temperature
11.	Phosphate (as PO ₄)	mg/l	5.0	0.40
12.	Chemical Oxygen Demand (as COD)	mg/l	250.0	12.0
13.	Biological Oxygen Demand (as BOD)	mg/l	30.0	2.4
14.	Chlorides (as Cl)	mg/l	1000.0	54.0
15.	Sulphate (as SO ₄)	mg/l	1000.0	<1.0

Report Prepared by :

For Mitra S.K. Private Limited



Mitra S.K. Private Limited

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



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TEST REPORT

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

Report No. : MSK/UDR/2019-20/946
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/01421
Sample Description : Treated Effluent Water
Sample Location : 13.2 MW WHR
Date of Collection : 16.08.2019

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27 ^o C)	---	6.5 to 8.5	6.52
2.	Total Suspended solids (TSS)	mg/l	100.0	14.0
3.	Oil & Grease	mg/l	10.0	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.98
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	^o C	Shall not exceed 5 ^o C above the receiving water temperature	4 ^o C higher than the intake water temperature
11.	Phosphate (as PO ₄)	mg/l	5.0	2.0
12.	Chemical Oxygen Demand (as COD)	mg/l	250.0	28.0
13.	Biological Oxygen Demand (as BOD)	mg/l	30.0	6.8
14.	Chlorides (as Cl)	mg/l	1000.0	290.0
15.	Sulphate (as SO ₄)	mg/l	1000.0	462.0

Report Prepared by :

For Mitra S.K. Private Limited



Mitra S.K. Private Limited

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



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TEST REPORT

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

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

Report No. : MSK/UDR/2019-20/948
Date : 31.08.2019
Sample No. : MSKGL/FD/2019-20/08/00252
Sample Description : Drinking Water
Sample Mark : 22 MW TPP
Date of Sampling : 16.08.2019

ANALYSIS RESULT OF WATER AS PER IS : 10500 – 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 28°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rffm: 2012	6.58
2.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	<1.0
3.	Total Hardness as CaCO ₃ in mg/l	200	600	IS 3025 (Part 21)-2013	332.0
4.	Residual Free Chlorine in mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2009	<0.1
5.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2009	104.0
6.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2009	17.3
7.	E. coli /100ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected
8.	Total Coliform Organism in /100 ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected

Report Prepared by :



Mitra S.K. Private Limited

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Kolkata – 700 016, West Bengal India
CIN: U51909WB1956PTC023037



TESTING • INSPECTION

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TEST REPORT

Name & Address of the Customer :

Thermax Ltd.

C/o J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

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

Report No. : MSK/UDR/2019-20/947

Date : 31.08.2019

Sample No. : MSKGL/FD/2019-20/08/00251

Sample Description : Drinking Water

Sample Mark : 13.2 MW TPP

Date of Sampling : 16.08.2019

ANALYSIS RESULT OF WATER AS PER IS : 10500 – 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 28°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rffm: 2012	6.64
2.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	<1.0
3.	Total Hardness as CaCO ₃ in mg/l	200	600	IS 3025 (Part 21)-2013	304.0
4.	Residual Free Chlorine in mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2009	<0.1
5.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2009	84.8
6.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2009	22.1
7.	E. coli /100ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected
8.	Total Coliform Organism in /100 ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected

Report Prepared by :

For Mitra S.K. Private Limited



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

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

Report No. : MSK/UDR/2019-20/412
Date : 09.07.2019
Sample No. : MSKGL/ED/2019-20/06/02347
Sample Description : Flue Gas Monitoring
Sampling Location : 22 MW Thermal Power Plant
Date & Time of Sampling : 12.06.2019 at 05.00 P.M

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Boiler	
2. Emission due to	: Power Generation	
3. Material of construction of Stack	: RCC	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
6. Generation Capacity	: 22 MW	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 105.0 m	
2. Diameter of the Stack at sampling point	: 3.88 m	
3. Area of Stack	: 11.82 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)	: 127	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 Oxygen (% v/v)	: 6.3	IS 13270:1992, Reaf:2014
5. Conc. of Particulate Matters (mg/Nm ³) at 6% O ₂ on dry basis	: 24.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack		: Electrostatic precipitator
F. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited
Authorized Signatory

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TEST REPORT

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

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

Report No. : MSK/UDR/2019-20/359
Date : 05.07.2019
Sample No. : MSKGL/FD/2019-20/06/00130
Sample Description : Drinking Water
Sample Mark : 22 MW TPP
Date of Sampling : 12.06.2019

ANALYSIS RESULT OF WATER AS PER IS : 10500 – 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 28°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rf1m: 2012	7.05
2.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rf1m: 2012	<1.0
3.	Total Hardness as CaCO ₃ in mg/l	200	600	IS 3025 (Part 21)-2013	673.20
4.	Residual Free Chlorine in mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rf1m:2009	<0.1
5.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rf1m: 2009	158.40
6.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rf1m: 2009	66.53
7.	E. coli /100ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected
8.	Total Coliform Organism in /100 ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signature

Mitra S. K. Private Limited



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TEST REPORT

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

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

Report No. : MSK/UDR/2019-20/358
Date : 05.07.2019
Sample No. : MSKGL/FD/2019-20/06/00129
Sample Description : Drinking Water
Sample Mark : 13.2 MW TPP
Date of Sampling : 12.06.2019

ANALYSIS RESULT OF WATER AS PER IS : 10500 – 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 28°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rffm: 2012	6.91
2.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	<1.0
3.	Total Hardness as CaCO ₃ in mg/l	200	600	IS 3025 (Part 21)-2013	297.0
4.	Residual Free Chlorine in mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2009	<0.1
5.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2009	110.88
6.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2009	4.75
7.	E. coli /100ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected
8.	Total Coliform Organism in /100 ml	Not Detectable		IS 1622:1981 RA 2003	Not Detected

Report Prepared by :

For Mitra S. K. Private Limited



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TEST REPORT

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

Report No. : MSK/UDR/2019-20/360
 Date : 05.07.2019
 Sample No. : MSKGL/ED/2019-20/06/01404
 Sample Description : Treated Effluent Water
 Sample Location : 22 MW TPP
 Date of Collection : 12.06.2019

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

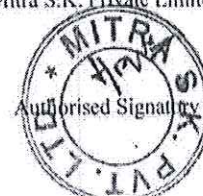
ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27° C)	---	6.5 to 8.5	7.38
2.	Total Suspended solids (TSS)	mg/l	100.0	<2.5
3.	Oil & Grease	mg/l	10.0	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.07
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	° C	Shall not exceed 5° C above the receiving water temperature	4° C higher than the intake water temperature
11.	Phosphate (as PO ₄)	mg/l	5.0	0.66
12.	Chemical Oxygen Demand (as COD)	mg/l	250.0	<4.0
13.	Biological Oxygen Demand (as BOD)	mg/l	30.0	<2.0
14.	Chlorides (as Cl)	mg/l	1000.0	121.0
15.	Sulphate (as SO ₄)	mg/l	1000.0	50.0

Report Prepared by :



For Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :

Thermax Ltd.

C/o J.K.Cement Works, Nimbahera

Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/361

Date : 05.07.2019

Sample No. : MSKGL/ED/2019-20/06/01405

Sample Description : Treated Effluent Water

Sample Location : 13.2 MW WHR

Date of Collection : 12.06.2019

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 27 ^o C)	---	6.5 to 8.5	6.91
2.	Total Suspended solids (TSS)	mg/l	100.0	17.0
3.	Oil & Grease	mg/l	10.0	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.81
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	^o C	Shall not exceed 5 ^o C above the receiving water temperature	4 ^o C higher than the intake water temperature
11.	Phosphate (as PO ₄)	mg/l	5.0	2.3
12.	Chemical Oxygen Demand (as COD)	mg/l	250.0	33.0
13.	Biological Oxygen Demand (as BOD)	mg/l	30.0	7.4
14.	Chlorides (as Cl)	mg/l	1000.0	295.0
15.	Sulphate (as SO ₄)	mg/l	1000.0	478.0

Report Prepared by :



For Mitra S. K. Private Limited



Mitra S. K. Private Limited



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TEST REPORT

Name & Address of the Customer :
J.K. Cement Works, Nimbahera
C/o Kailash Nagar – 312617
Nimbahera – Distt. Chittorgarh (Raj.)

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

Report No. : MSK/UDR/2019-20/146
Date : 10.05.2019
Sample No. : MSKGL/ED/2019-20/04/01122
Sample Description : Ground Water from Tube well
Sample Mark : Nimbahera Plant
Date of Sampling : 25.04.2019

ANALYSIS RESULT OF WATER AS PER IS : 10500 – 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 28°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rffm: 2012	7.49
2.	Conductivity at 25°C in $\mu\text{mhos/cm}$	---	---	IS 3025 (Part 14)- 2013	854.0
3.	Colour in Hazen	5	15	IS 3025 (Part 4)-1983; Rffm:2002	<1.0
4.	Odour	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Unobjectionable
5.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	<1.0
6.	Total Dissolved Solids in mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2002	480.0
7.	Total Suspended Solids in mg/l	---	---	IS 3025 (Part 24)-1986; Rffm:2009	<2.5
8.	Total Hardness as CaCO_3 in mg/l	200	600	IS 3025 (Part 21)-2013	257.0
9.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2009	69.0
10.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2009	20.0
11.	Total Alkalinity as CaCO_3 in mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	153.0
12.	Chloride as Cl in mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2009	84.0
13.	Oil & Grease in mg/l	---	---	IS 3025(Part 39)-Rffm 2009	<1.4
14.	Fluoride as F in mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	0.69
15.	Iron as Fe in mg/l	0.3	No relaxation	IS 3025 (Part 53)-1988 Rffm: 2009	<0.05

Report Prepared By

For Mitra S. K. Pvt Ltd.

Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :
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Nimbahera - Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2019-20/940
Date : 31.08.2019
Sample No. : MSKGL/ED/2019-20/08/00870
Sample Description : Ground Water from Tube well
Sample Mark : Nimbahera Plant
Date of Sampling : 16.08.2019

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

ANALYSIS RESULT OF WATER AS PER IS : 10500 - 2012

Sl No.	Parameter	Desirable Limit	Permissible Limit	Method	Result
1.	pH at 25°C	6.5-8.5	No Relaxation	IS 3025 (Part 11)-1983; Rfim: 2012	7.14
2.	Conductivity at 25°C in $\mu\text{mhos/cm}$	---	---	IS 3025 (Part 14)- 2013	790.0
3.	Colour in Hazen	5	15	IS 3025 (Part 4)-1983; Rfim:2002	<1.0
4.	Odour	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rfim:2012	Unobjectionable
5.	Turbidity in N.T.U	1	5	IS 3025 (Part 10)-1984 Rfim: 2012	<1.0
6.	Total Dissolved Solids in mg/l	500	2000	IS 3025 (Part 16)-1984; Rfim:2002	456.0
7.	Total Suspended Solids in mg/l	---	---	IS 3025 (Part 24)-1986; Rfim:2009	<2.5
8.	Total Hardness as CaCO_3 in mg/l	200	600	IS 3025 (Part 21)-2013	428.0
9.	Calcium as Ca in mg/l	75	200	IS 3025 (Part 40)- 1991 Rfim: 2009	112.0
10.	Magnesium as Mg in mg/l	30	100	IS 3025 (Part 46)-1994 Rfim: 2009	17.2.0
11.	Total Alkalinity as CaCO_3 in mg/l	200	600	IS 3025 (Part 23)- 1986 Rfim: 2009	246.0
12.	Chloride as Cl in mg/l	250	1000	IS 3025 (Part 32)-1988 Rfim: 2009	20.0
13.	Oil & Grease in mg/l	---	---	IS 3025(Part 39)-Rfim 2009	<1.4
14.	Fluoride as F in mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rfim: 2013	0.72
15.	Iron as Fe in mg/l	0.3	No relaxation	IS 3025 (Part 53)-1988 Rfim: 2009	<0.05

Report Prepared By



PHOTOGRAPHS OF SNCR SYSTEM FOR NO_x CONTROL AT NIMBAHERA CEMENT PLANT