

JK Cement LTD.

CIN : L17229UP1994PLC017199

ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018 | ISO 50001:2018 CERTIFIED COMPANY

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

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

By Mail

Date: 29.05.2021

To,
The Director (I),
Ministry of Environment, Forest & Climate Change,
Indira Paryavaran Bhavan,
JOR Bagh Road, Aliganj,
New Delhi-110003

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

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

Dear Sir,

With reference to above stated Environment Clearance (EC) accorded for our Mangrol plant, Clinker (2.90 MMTPA to 5.65 MMTPA) and Cement (3.54 MMTPA to 7.05 MMTPA) Captive Power Plant from 25 MW to 60 MW, and WHRB from 10 MW to 36 MW at our J.K. Cement Works, Mangrol. Please find attached herewith six monthly compliance for the **period from Oct' 2020 to Mar' 2021**. 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 , 'monitoring-ec@nic.in' for your kind reference and record please. We trust you will find the same in order.

Thanking you,

Yours Faithfully
For J.K. Cement Works, Mangrol

Anil Kumar Jain
Sr. General Manager (Environment)

Encl: a/a
Copy to:

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

Corporate & Registered Office : Kamla Tower, Kanpur-208001, (U. P.) INDIA
Phone : +91-512-2371478 to 81 **Fax :** 2399854 **E-mail :** ho.grey@jkcement.com



J. K. Cement Works, Nimbahera
J. K. Cement Works Mangrol
J. K. Cement Works, Gotan
J. K. Cement Works, Jharli

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





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

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

Period: October-20 to March-21

For

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

Submitted to:

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


Submitted by:

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





COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

S. No.	Details of Conditions	Conditions Compliance Status
Specific Conditions		
(i)	The project proponent should install 24x7 air monitoring devices to monitor air emission, as provided by the CPCB and submit report to Ministry and its Regional Office.	<p>Complying with,</p> <p>Four nos. Continuous Air Quality Monitoring Station (CAAQMS) has installed at periphery of the plant for ambient air quality monitoring and real time data are being transmitted to SPCB/SPCB portal.</p> <p><u>Photographs of CAAQMS:</u></p> 
(ii)	The Standard issued by the Ministry vide G.S.R. No. 612 (E) dated 25 th August, 2014 and subsequent amendment dated 9 th May, 2016 and 10 th May, 2016 regarding cement plant with respect to particulate matter, SO ₂ and NO _x shall be followed.	<p>Complying with.</p> <p>Unit is meeting the PM emission within the limit for which Bag House installed. To meet the NO_x emission within the limit SNCR is installed.</p> <p><u>Photographs of SNCR:</u></p>



COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

		 <p>Stack emission monitoring report for the period Oct-20 to Mar-21 enclosed as Annexure-1.</p>
(iii)	<p>Continuous stack monitoring facilities to monitor gaseous emissions from process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filter to coal mill and cement mill. Low Nox burner shall be provide to control Nox emissions. Regular calibration of the instruments must be ensured.</p>	<p>Complying with,</p> <ul style="list-style-type: none"> CEMS system have been installed for monitoring of PM, SO₂ and NO_x at all stack. Bag house installed at kiln section, cement mills & coal mills section ESP installed at Boiler stack and cooler section. Low NO_x burner has installed in Line-1, Line- 2 & Line- 3. Real time data are being uploading regularly on SPCB & RSPCB web portal. <p style="text-align: center;">Photographs of Continuous Stack Emission Monitoring System</p> <p>Opacity meters</p> 

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

		<p>Gas analyzer</p>  
(iv)	Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonnes for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.	All suitable measures like VVFD, high efficient motors have been adopted to reduce power consumption. Over all specific power consumption for cement production in FY 2020-21 achieved 59.1 KWh/t of cement.
(v)	The National Air Quality Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16 th November, 2009 shall be followed.	Complying with, Ambient air quality monitoring report of NABL accredited lab enclosed as Annexure-II .
(vi)	AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.	Complying with,
(vii)	Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.	Complying with, To control the secondary fugitive emissions, bag filter installed at material transfer point and encloser at hopper, water spray system, covered shed and storage silo for intermediate & finished

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

product.

Photographs of control measures for fugitive emission:



Raw material belt conveyor covered



Bag filters installed at material transfer point



Raw meal storage in CF silo



Clinker Storage Silo

Fugitive emission monitoring report of period Oct-20 to Mar-21 mention below table:

Unit -1

S.No.	Month/Year	SPM ($\mu\text{g}/\text{m}^3$)			
		Near Coal Yard-1	Near Limestone Crushing Site-1	Near Stacker Reclaimer-1	Near Gypsum Yard-1
1	Oct-20	1678.8	1828.2	1564.2	1336.6
2	Nov-20	1482.9	1864.5	1326.8	1469.1
3	Dec-20	1516.5	1828.4	1941.7	1122.7
4	Jan-21	1408.2	2130.7	1949.3	1649.8



COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

		<table><tr><td>5</td><td>Feb-21</td><td>1502.9</td><td>2145.2</td><td>2039.0</td><td>1736.5</td></tr><tr><td>6</td><td>Mar-21</td><td>1584.8</td><td>2229.4</td><td>2122.0</td><td>1831.6</td></tr></table>	5	Feb-21	1502.9	2145.2	2039.0	1736.5	6	Mar-21	1584.8	2229.4	2122.0	1831.6																																																																																
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		<p><u>Unit –II</u></p> <table><tr><th rowspan="2">S.No.</th><th rowspan="2">Month/Year</th><th colspan="4">SPM (µg/m3)</th></tr><tr><th>Near Coal Yard-2</th><th>Near Limestone Crushing Site-2</th><th>Near Stacker Reclaimer-2</th><th>Near Gypsum Yard-2</th></tr><tr><td>1</td><td>Oct-20</td><td>1534.6</td><td>1616.3</td><td>1658.7</td><td>1313.9</td></tr><tr><td>2</td><td>Nov-20</td><td>1604.2</td><td>1751.4</td><td>1437.0</td><td>1341.7</td></tr><tr><td>3</td><td>Dec-20</td><td>1571.4</td><td>1818.1</td><td>1969.8</td><td>1398.1</td></tr><tr><td>4</td><td>Jan-21</td><td>1786.3</td><td>1971.5</td><td>2379.2</td><td>1806.8</td></tr><tr><td>5</td><td>Feb-21</td><td>1820.8</td><td>2077.3</td><td>2477.2</td><td>1949.7</td></tr><tr><td>6</td><td>Mar-21</td><td>1913.8</td><td>2153.4</td><td>2533.7</td><td>2026.5</td></tr></table> <p><u>Unit-III</u></p> <table><tr><th rowspan="2">S.No.</th><th rowspan="2">Month/Year</th><th colspan="4">SPM (µg/m3)</th></tr><tr><th>Near Coal Yard-3</th><th>Near Limestone Crushing Site-3</th><th>Near Stacker Reclaimer-3</th><th>Near Gypsum Yard-3</th></tr><tr><td>1</td><td>Oct-20</td><td>1638.8</td><td>1557.0</td><td>1423.6</td><td>1326.9</td></tr><tr><td>2</td><td>Nov-20</td><td>1778.4</td><td>1607.4</td><td>1310.7</td><td>1460.5</td></tr><tr><td>3</td><td>Dec-20</td><td>1339.8</td><td>1889.7</td><td>1831.1</td><td>1788.1</td></tr><tr><td>4</td><td>Jan-21</td><td>1827.9</td><td>2199.3</td><td>2094.3</td><td>1626.2</td></tr><tr><td>5</td><td>Feb-21</td><td>1869.3</td><td>2244.4</td><td>2157.2</td><td>1686.4</td></tr><tr><td>6</td><td>Mar-21</td><td>1950.8</td><td>2340.7</td><td>2272.8</td><td>1763.1</td></tr></table>	S.No.	Month/Year	SPM (µg/m3)				Near Coal Yard-2	Near Limestone Crushing Site-2	Near Stacker Reclaimer-2	Near Gypsum Yard-2	1	Oct-20	1534.6	1616.3	1658.7	1313.9	2	Nov-20	1604.2	1751.4	1437.0	1341.7	3	Dec-20	1571.4	1818.1	1969.8	1398.1	4	Jan-21	1786.3	1971.5	2379.2	1806.8	5	Feb-21	1820.8	2077.3	2477.2	1949.7	6	Mar-21	1913.8	2153.4	2533.7	2026.5	S.No.	Month/Year	SPM (µg/m3)				Near Coal Yard-3	Near Limestone Crushing Site-3	Near Stacker Reclaimer-3	Near Gypsum Yard-3	1	Oct-20	1638.8	1557.0	1423.6	1326.9	2	Nov-20	1778.4	1607.4	1310.7	1460.5	3	Dec-20	1339.8	1889.7	1831.1	1788.1	4	Jan-21	1827.9	2199.3	2094.3	1626.2	5	Feb-21	1869.3	2244.4	2157.2	1686.4	6	Mar-21	1950.8	2340.7	2272.8	1763.1
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(viii)	A statement on carbon budgeting including the quantum of equivalent CO ₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO ₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared within a period of 6 Months and subsequently it should be prepared every year.	<p>We are continuously making efforts to reduce CO₂ emissions:</p> <ol style="list-style-type: none">1. Increase the green power generation from waste heat of cement plant by Waste Heat recovery Boiler.2. For reduction of mineral consumption, increase the PPC production.3. For reduction of fossil fuel consumption, Hazardous & others waste are being co-processed as a AFR. Total 1,18,166.39 MT waste material co-processed as AFR & alternative raw material in FY 2020-21.4. Dense green belt is developed in & around the plant & colony.																																																																																												

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

(ix)	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc.	No any workmen/ employee are being allowed to work more than 4 hr. where temperature is more than 50°C. However, during shutdown, works start only after cooling of equipment. Personal protective equipment (PPEs) are being provided to respective worker.
(x)	Arsenic and Mercury shall be monitored in emissions, ambient air and water.	Arsenic and mercury monitoring in emissions, ambient air & water is being carried out by MOEF&CC recognised lab.
(xi)	The coal yard shall be lined and covered.	<p>Complying with,</p> <p>Coal are being storage in covered storage yard.</p> <div style="display: flex; justify-content: space-around;">   </div>
(xii)	The project proponent shall prepare a report on impact of project on surrounding reserve forest within six months and will get it approved from the	<p>Not applicable,</p> <p>There is no Wildlife Sanctuary, National Park, within 10 Km periphery of the lease area. (Ref.</p>


COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

	State Forest Department. A copy of the conservation with the State Forest and Wildlife Department. A copy of the same should be submitted to the Ministry and its Regional Office.	Annexure-III) The same has been authenticated by Deputy Conservator of forest Chittorgarh vide letter no. AF () survey/UVS/2020-21/6048 dated 23.09.2020.
(xiii)	The project proponent shall take all precautionary measures for conservation and protection of wild fauna in the study area. A Wildlife Conservation Plan specific to this project site shall be prepared in consultation with State Forest and Wildlife Department. A copy of the Conservation plan shall be submitted to the Ministry and its Regional Office.	<p>Complying with,</p> <p>The Wildlife conservation plan has been prepared for six nos. of the following Schedule-I species found in the buffer area during the survey:</p> <p>Pavocristatus (Indian Peafowl), Panthera pardus fusca (Indian Leopard), Prionailurus rubiginosus (Rusty-Spotted Cat), Canis lupus pallipes (Indian Wolf), Varanus bengalensis (Indian Monitor Lizard) & Gyps indicus/Gyps bengalensis (Indian Vulture)</p> <p>Combined Wildlife Conservation Plan has been approved by the Principal Conservator of Forest, Udaipur and recommendations forwarded to Additional Chief Conservator of Forest Jaipur for formal sanction vide letter no. F 5() forest conservation/ Principal conservator of Forest/2020-21/ 5002 dated 24.09.2020 and same proposal has been forwarded to APCCF, Jaipur on 15.10.2020 by DYCF, Jaipur. After approval of APCCF conservation plan will be implemented.</p>
(xiv)	The project proponent will also provide the latest status of the environment compliances in respect of its existing plant.	<p>Complying with,</p> <p>Periodical EC compliance is being submitted and last EC compliance report submitted vide our letter no. MGR/PC/21/C13 dated 26/11/2020 & soft copy send by email on dated 30/11/2020 for the period from Apr-20 to Sept-2020.</p>
(xv)	Efforts shall be made to reduce impact of the transport of the raw material and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate	<p>Complying with,</p> <p>Raw material like coal/ petcock is being transported through rail and maximum quantity of finished product dispatch through rail. Fly ash is being sourced from nearby to reduce the transportation impact. Separate truck parking area facilitated near the factory gate and regular water spray on road & yard being done.</p>



COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

	<p>truck parking area. Vehicular emissions shall be regularly monitored.</p>	<div style="display: flex; justify-content: space-around;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <p>Material Transportation by railway</p> <p>Water spraying system (fog system) at coal unloading point</p> </div>
<p>(xvi)</p>	<p>Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated waste water shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process waste water shall be discharged outside the factory premises and 'zero' discharge shall be adopted.</p>	<p>Complying with,</p> <p>For reduce the water consumption, unit has already installed air cooled condensers in captive power plant & WHRS.</p> <p>For maintain ZERO LIQUID DISCHARGE UNIT', 100% treated water of WHRS & CPP are being utilization in cement plant for cooling purpose & dust suppression.</p> <p style="text-align: center;">Photographs of ACC system</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

(xvii)	Efforts shall be made to make use of rain water harvested. If needed capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<p>Complying with,</p> <p>Our unit has taken various step on water harvesting and conservation through plant optimization and taking up various support programme in and around our unit under CSR initiative also. Total 16 nos. artificial rain water harvesting structures (Injection well) & 01 Nos. artificial pond constructed in our plant, Colony for recharge the ground water.</p> <p style="text-align: center;">Photographs of Rain water harvesting structure (Injection Well)</p> <div></div>																											
(xviii)	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated waste water shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986.	<p>Complying with,</p> <ul style="list-style-type: none">• No any effluent generated from cement plant.• Only Domestic sewage generated from colony & plant which is treated in through STP and reuse in plantation.• Effluent generated from CPP & WHRS, after neutralization reuse in cement plant.• Treated waste water analysis data of CPP & WHRS is mention below table: <p>Domestic sewage treated water analysis data of Sewage Treatment Plant:</p> <table><tr><th>S. N o.</th><th>Parameters</th><th>Standards</th><th>Oct-20</th><th>Nov-20</th><th>Dec-20</th><th>Jan-21</th><th>Feb-21</th><th>Mar-21</th></tr><tr><td>1</td><td>pH</td><td>Between 5.5 to 9.0</td><td>7.75</td><td>7.91</td><td>7.69</td><td>7.46</td><td>7.5</td><td>7.7</td></tr><tr><td>2</td><td>Chlorides as Cl</td><td>Not to exceed 1000 mg/l</td><td>117</td><td>123</td><td>139</td><td>98.0</td><td>105.0</td><td>116</td></tr></table>	S. N o.	Parameters	Standards	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	1	pH	Between 5.5 to 9.0	7.75	7.91	7.69	7.46	7.5	7.7	2	Chlorides as Cl	Not to exceed 1000 mg/l	117	123	139	98.0	105.0	116
S. N o.	Parameters	Standards	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21																					
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(Period October - 2020 to March-2021)

		3	Total Suspended solids	Not to exceed 100 mg/l	25	18	5.3	9.4	7.5	5.9																																																																														
		4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	<2.5	<2.0	<2.0	7.1	2.5	<3.0																																																																														
		5	Chemical Oxygen Demand	Not to exceed 250 mg/l	7.9	23	8	24.0	20.5	22.8																																																																														
		6	Oil & Grease	Not to exceed 10 mg/l	<1.4	<1.4	<1.1	<1.4	<2.0	<1.0																																																																														
		7	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	<0.1	<0.1	<0.1	7.2	<0.1	<0.1																																																																														
		8	Sulphide (as S)	Not to exceed 2.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1																																																																														
		9	Total Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1																																																																														
		ETP treated water analysis data of Captive Power Plant :																																																																																						
		<table><tr><th rowspan="2">Parameters</th><th rowspan="2">RPCB Limits</th><th colspan="6">Analysis results</th></tr><tr><th>Oct-20</th><th>Nov-20</th><th>Dec-20</th><th>Jan-21</th><th>Feb-21</th><th>Mar-21</th></tr><tr><td>Total Suspended Solids (TSS)</td><td>Not to exceed 100 mg/l</td><td>21</td><td>9.1</td><td>25</td><td>22</td><td>4</td><td>26</td></tr><tr><td>Oil & Grease</td><td>Not to exceed 10 mg/l</td><td><1.8</td><td><1.4</td><td><1.4</td><td><1.2</td><td><1.4</td><td><1.4</td></tr><tr><td>Total Residual Chlorine</td><td>Not to exceed 1.0 mg/l</td><td><0.1</td><td><0.1</td><td><0.1</td><td><0.1</td><td><0.01</td><td><0.1</td></tr><tr><td>Free available chlorine</td><td>Not to exceed 0.5 mg/l</td><td><0.1</td><td><0.1</td><td><0.1</td><td><0.1</td><td><0.1</td><td><0.1</td></tr><tr><td>pH Value</td><td>Between 6.5 to 8.5</td><td>7.20</td><td>8.35</td><td>7.45</td><td>7.30</td><td>7.70</td><td>7.45</td></tr><tr><td>Temperature</td><td>Shall not exceed 5°C above the receiving water temperature</td><td>4°C Higher then the intake water</td><td>4°C Higher then the intake water</td><td>4°C Higher then the intake water</td><td>4°C Higher then the intake water</td><td>4°C Higher then the intake water</td><td>4°C Higher then the Intake water</td></tr><tr><td>Copper as (Cu)</td><td>Not to exceed 1.0 mg/l</td><td><0.02</td><td><0.02</td><td><0.02</td><td><0.01</td><td><0.02</td><td><0.02</td></tr><tr><td>Zinc (as</td><td>Not to exceed 1.0</td><td><0.02</td><td><0.02</td><td><0.01</td><td><0.02</td><td><0.02</td><td><0.01</td></tr></table>									Parameters	RPCB Limits	Analysis results						Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Total Suspended Solids (TSS)	Not to exceed 100 mg/l	21	9.1	25	22	4	26	Oil & Grease	Not to exceed 10 mg/l	<1.8	<1.4	<1.4	<1.2	<1.4	<1.4	Total Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.01	<0.1	Free available chlorine	Not to exceed 0.5 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	pH Value	Between 6.5 to 8.5	7.20	8.35	7.45	7.30	7.70	7.45	Temperature	Shall not exceed 5°C above the receiving water temperature	4°C Higher then the intake water	4°C Higher then the intake water	4°C Higher then the intake water	4°C Higher then the intake water	4°C Higher then the intake water	4°C Higher then the Intake water	Copper as (Cu)	Not to exceed 1.0 mg/l	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	Zinc (as	Not to exceed 1.0	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01
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COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

		Zn)	mg/l						
		Iron (Total)	Not to exceed 1.0 mg/l	0.04	0.56	0.04	0.03	0.30	0.02
		Chromium (total)	Not to exceed 0.2 mg/l	0.06	<0.01	0.06	0.04	<0.01	0.06
		BOD	Not to exceed 30 mg/l	6.75	2.60	7.10	7.70	<2.0	7.95
		COD	Not to exceed 250 mg/l	28.0	12.0	31.0	38.0	8.0	42.0
		Phosphate	Not to exceed 5 mg/l	0.70	0.27	0.90	0.75	0.61	0.85
		ETP treated water analysis data of Waste Heat Recovery System :							
		Parameters	RPCB Limits	Analysis results					
				Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
		Total Suspended Solids (TSS)	Not to exceed 100 mg/l	42.00	6.20	45.00	41.00	3.20	44.00
		Oil & Grease	Not to exceed 10 mg/l	<1.2	<1.4	<1.6	<1.4	<1.4	<1.6
		Total Residual Chlorine	Not to exceed 1.0 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		Phosphate	Not to exceed 05 mg/l	0.90	<0.15	75	0.85	<0.15	0.95
		Free available chlorine	Not to exceed 0.5 mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		pH Value	Between 6.5 to 8.5	7.65	7.60	7.85	7.60	7.73	7.40
		Temperature	Shall not exceed 5°C above the receiving water temperature	4°C Higher than the intake water	4°C Higher than the intake water	4°C Higher than the intake water	4°C Higher than the intake water	4°C Higher than the intake water	4°C Higher than the intake water
		Copper as (Cu)	Not to exceed 1.0 mg/l	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02
		Zinc (as Zn)	Not to exceed 1.0 mg/l	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02
		Iron (Total)	Not to exceed 1.0 mg/l	0.05	0.96	0.03	0.02	0.2	0.03
		Chromium (total)	Not to exceed 0.2 mg/l	0.01	<0.01	0.04	0.05	<0.01	0.03



COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

		<table><tr><td>BOD</td><td>Not to exceed 30 mg/l</td><td>7.2</td><td><2.0</td><td>7.6</td><td>7.1</td><td>3.8</td><td>7.4</td></tr><tr><td>COD</td><td>Not to exceed 250 mg/l</td><td>48.0</td><td><4.0</td><td>42.00</td><td>40.00</td><td>16.00</td><td>43.00</td></tr></table> <p>Treated waste water analysis report of NABL accredited lab enclosed as Annexure-IV.</p>	BOD	Not to exceed 30 mg/l	7.2	<2.0	7.6	7.1	3.8	7.4	COD	Not to exceed 250 mg/l	48.0	<4.0	42.00	40.00	16.00	43.00
BOD	Not to exceed 30 mg/l	7.2	<2.0	7.6	7.1	3.8	7.4											
COD	Not to exceed 250 mg/l	48.0	<4.0	42.00	40.00	16.00	43.00											
(xix)	All the bag filter, raw mill dust, coal dust, clinker dust and cement dust from Pollution Control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers/ re-processors only.	<p>Complying with, Raw mill dust, coal dust, clinker dust and cement dust from Pollution control equipment like Bag house / ESP are being 100% recycled in cement plant.</p> <p>Hazardous waste i.e. Used Oil (5.1), Waste oil (5.2) are being sold to authorized recyclers & batteries return back to supplier as well as recycler.</p>																
(xx)	The kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass, etc.	<p>Complying with,</p> <p>AFR feeding system has been installed for solid as well as for liquid AFR feeding.</p> <p>Photographs of liquid & Solid waste feeding system</p> <div></div>																
(xxi)	The proponent shall examine and prepare a plan for utilization of high calorific waste such as chemical waste, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify	<p>Complying with,</p> <p>We are having various hazardous waste / other waste permissions from CPCB / RSPCB to use as Alternative fuel & raw materials (AFR) in cement plant.</p> <p>In FY 2020-21, Total 1,18,166.39 MT Hazardous & Other waste co-processed in cement kiln as</p>																




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	suitable industries with such waste and enter into an MOU for long-term utilization of such waste as per the Environment (protection) Rules, 1986 and with necessary approvals.	AFR & alternative raw material.
(xxii)	Efforts shall be made to use the high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating hazardous waste and in accordance with Hazardous Waste Regulation and prior approval of the MPPCB .	Complying with, We are using various type of hazardous waste / other waste in kiln, and ARM in cement manufacturing with due permission obtained from CPCB / RSPCB.
(xxiii)	Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.	<p>Complying with.</p> <ul style="list-style-type: none"> • Total area of Plant = 126.95 ha. • Green belt in plant area = 41.89 ha. • Total nos. of tree in plant up to March 2021 = 143976 nos. (survival rate 88 %) • Total area of colony = 22.47 ha. • Green belt in colony = 7.44 ha. • Total nos. of tree in colony up to March 2021= 25571 nos. (survival rate 88%) • Total survived plantation up to March 2021 including plant & colony = 169547 nos. <p style="text-align: center;">Photographs of Plantation</p> <div style="display: flex; justify-content: space-around;">   </div>

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(Period October - 2020 to March-2021)

		 
(xxiv)	The project proponent shall provide for solar light system for all common areas, street light, village and parking around project area and maintain the same regularly.	<p>Complying with, Solar light system installed as per feasibility of area like street, parking area & mine office roof top area etc.</p> 
(xxv)	The project proponent shall provide for LED light in their offices and residential areas.	Complied, we have replaced existing light in the offices and residential areas by LED light.
(xxvi)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.	<p>Complying with,</p> <p>All recommendations made in the Charter on Corporate responsibility for Environment protection (CREP) for the Cement plant & Captive power plant.</p> <ol style="list-style-type: none"> 1. All material belt conveyors are covered with metal sheet. 2. All road in cement plant are paved & cleaning by vacuum sweeping machine for minimize the fugitive dust emission.

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		<ol style="list-style-type: none"> 3. High efficient bag filters install at all material transfer point. 4. All raw materials stored in covered storage yard & intermediate, finish product stored in silos. 5. Bag house at Raw mill & Kiln, Coal Mill, Cement Mill etc. stack to maintain particular matter emission level of <30 mg/Nm³. 6. Fly ash unloading through pneumatic system. 7. Water spraying system installed at source of fugitive dust emission points. 8. ESP's installed at cooler & Boiler stack.
(xxvii)	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and items-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regards shall be submitted to the Ministry's Regional Office.	Agreed & complied.
(xxviii)	In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the CSR Plan	Agreed & complied.

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(Period October - 2020 to March-2021)

	shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.	
(xxix)	A risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of Environment Clearance letter.	<p>Complying, we are having the onsite emergency plan with respect to following objectives.</p> <ul style="list-style-type: none"> • To overcome any emergency in its initial stage and to handle Disaster in most effective manner. • To eliminate any chance of loss to Human Life. • To minimise loss of Property in the Plant and surrounding areas. • To maintain essential supplies at the time of natural Calamities and / or Public disturbances. <p>Approved On-Site Emergency Plan has been submitted at concern offices.</p>
(xxx)	To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.	We have displayed Environment health & safety slogan / messages in the existing Plant premises to spread the awareness with respect to hazard and the associated health effects.
(xxxi)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	All necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. has provided during the construction period.
GENERAL CONDITIONS		
(i)	The Project authorities must strictly adhere to the stipulation made by the Rajasthan Pollution Control Board and the State Government.	<p>Complying with,</p> <p>Consent to Operate have been granted for Cement Plant L-1, L-2, L-3, Power Plant, WHRS & Residential township by Rajasthan State Pollution Board, Jaipur & Comply all conditions</p>

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

		regularly.																																		
(ii)	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEFCC).	Complying with ,We will take prior approval of the Ministry of Environment, Forest & Climate Change (MoEF&CC) for expansion or modification in the plant, if any.																																		
(iii)	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x are anticipate in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Lucknow and the SPCB/CPCB once in Six months.	Complying with, we have already installed 4 ambient air monitoring stations for PM10, PM2.5, SO2 & NOx in consultation with the State Pollution Control Board and monitoring data is being regular submitted to the Ministry and its regional office at Lucknow and the SPCB/CPCB. Monitoring report of stack emission enclosed as above Annexure-I & ambient air quality enclosed as above Annexure-1I .																																		
(iv)	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	There is no waste water discharge from cement plant hence ‘Zero discharge’ facility adopted and waste water from CPP & WHR after treatment are reuse for dust suppression and machineries cooling in the cement plant.																																		
(v)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75dBA (daytime) and 70 dBA (night time).	<div>Complying with,</div> <div>Silencer, acoustic hoods, enclosers etc. are provided at noise generation point and PPEs provided to respective workmen. Noise monitoring report of ambient air mention below table:</div> <table><tr><th rowspan="3">Month</th><th colspan="8">Oct -20 to Mar-21</th></tr><tr><th colspan="2">Near Time office</th><th colspan="2">Near Thermal Power Plant</th><th colspan="2">Near Factory Gate</th><th colspan="2">Near Colony Gate</th></tr><tr><th>Day</th><th>Night</th><th>Day</th><th>Night</th><th>Day</th><th>Night</th><th>Day</th><th>Night</th></tr><tr><td>Oct-20</td><td>66</td><td>53.9</td><td>68.1</td><td>58.3</td><td>70.1</td><td>58.3</td><td>70.5</td><td>60.8</td></tr></table>	Month	Oct -20 to Mar-21								Near Time office		Near Thermal Power Plant		Near Factory Gate		Near Colony Gate		Day	Night	Day	Night	Day	Night	Day	Night	Oct-20	66	53.9	68.1	58.3	70.1	58.3	70.5	60.8
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COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

		<table><tr><td>Nov-20</td><td>67.2</td><td>54.2</td><td>67.3</td><td>56.9</td><td>71.3</td><td>57.9</td><td>71.3</td><td>60.1</td></tr><tr><td>Dec-20</td><td>65.6</td><td>53.9</td><td>68.9</td><td>57.6</td><td>69.9</td><td>56.8</td><td>68.9</td><td>58.3</td></tr><tr><td>Jan-21</td><td>68.2</td><td>54.2</td><td>69.3</td><td>56.3</td><td>67.5</td><td>57.5</td><td>65.2</td><td>52.8</td></tr><tr><td>Feb-21</td><td>67.9</td><td>52.4</td><td>69.2</td><td>56.4</td><td>68.4</td><td>58.6</td><td>68</td><td>56.2</td></tr><tr><td>Mar-21</td><td>66.9</td><td>52.9</td><td>68.8</td><td>56.2</td><td>70.2</td><td>59.3</td><td>67.8</td><td>55.4</td></tr></table> <p>Noise level monitoring report by NABL accredited lab for the period of Oct-20 to Mar-21 are enclosed as Annexure-V.</p>	Nov-20	67.2	54.2	67.3	56.9	71.3	57.9	71.3	60.1	Dec-20	65.6	53.9	68.9	57.6	69.9	56.8	68.9	58.3	Jan-21	68.2	54.2	69.3	56.3	67.5	57.5	65.2	52.8	Feb-21	67.9	52.4	69.2	56.4	68.4	58.6	68	56.2	Mar-21	66.9	52.9	68.8	56.2	70.2	59.3	67.8	55.4
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Feb-21	67.9	52.4	69.2	56.4	68.4	58.6	68	56.2																																							
Mar-21	66.9	52.9	68.8	56.2	70.2	59.3	67.8	55.4																																							
(vi)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers is being done periodically.																																													
(vii)	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Complying, we have already developed 16 nos. of injection well and 1 recharge pond in the cement plant & colony.																																													
(viii)	The project proponent shall also comply with all the environment protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, education programmes, drinking water supply and health care etc.	<p>Complying with, Environment protection measures and safeguards recommended in the EIA/EMP report is adopted. We have undertaken socio – economic development under CSR activities like community development programmes, education programmes, drinking water supply and health care etc. The details of expenditure of FY 2020-21 for cement plant & associated mines are given as below :</p> <table><tr><th>S.N.</th><th>Focus Area</th><th>Amount Expenditure (Rs.)</th></tr><tr><td>1</td><td>Community Welfare</td><td>1835564</td></tr><tr><td>2</td><td>Disaster Relief</td><td>74200</td></tr><tr><td>3</td><td>Drinking Water Arrangement</td><td>1865020</td></tr><tr><td>4</td><td>Educational Charity</td><td>1606100</td></tr><tr><td>5</td><td>Health</td><td>367500</td></tr><tr><td>6</td><td>Livelihood Promotion</td><td>2565332</td></tr><tr><td>7</td><td>Rural Development</td><td>4299686</td></tr><tr><td>8</td><td>Sports Promotion</td><td>21910</td></tr><tr><td></td><td>Total Expenditure (Rs.)</td><td>12635312</td></tr></table>	S.N.	Focus Area	Amount Expenditure (Rs.)	1	Community Welfare	1835564	2	Disaster Relief	74200	3	Drinking Water Arrangement	1865020	4	Educational Charity	1606100	5	Health	367500	6	Livelihood Promotion	2565332	7	Rural Development	4299686	8	Sports Promotion	21910		Total Expenditure (Rs.)	12635312															
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(Period October - 2020 to March-2021)

(ix)	<p>Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Lucknow. The funds so provide shall not be diverted for any other purpose.</p>	<p>Complying with.</p> <p>Total amount Rs. 65,71,000/- spent for Environment Management including regulatory charges ,environment monitoring ,water charges etc.</p>
(x)	<p>A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestion/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.</p>	<p>Complied, A copy of Environmental clearance letter has been sent to the SDM, Nimbhaera tehsil, The Sarpanch, Gram panchayat, Mangrol, DIC, Chittorgarh, Chief Executive officer Zila parishad, Chittorgarh The District Magistrate, Chittorgarh on dated 19.09.2016 The clearance letter has uploaded on the website of the company i.e. www.jkcement.com</p>

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

(xi)	<p>The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEFCC at Lucknow. The respective zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.</p>	<p>Periodical EC compliance with monitored data are being uploaded at company website and same sent to MOEF, Lucknow, Delhi, CPCB, RPCB in soft copy. The criteria pollutant level namely; PM 10, SO2, NOx (ambient levels as well as stack emissions) for is being displayed at main gate of the company for the public domain.</p> 
(xii)	<p>The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Lucknow/ CPCB/SPCB shall monitor the stipulated conditions.</p>	<p>Complying with,</p> <p>last EC compliance report submitted vide our letter no. MGR/PC/21/C13 dated 26/11/2020 & soft copy send by email on dated 30/11/2020 for the period from Apr-20 to Sept -20.</p>

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

(xiii)	<p>The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Lucknow by e-mail.</p>	<p>The Environment Statement report of our existing cement plant of FY 2019-20 has submitted vide letter no. MGR/PC/ESR/21/265 to 270 & 277 , Date: 15.09.2020 to the State Pollution Control Board and regional office of the MoEF& CC at Lucknow and uploaded at company website which can be assess by following link.</p> <p>https://www.jkcement.com/environmental-compliance</p>
(xiv)	<p>The Project Proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment, Forest and Climate Change (MoEFCC) at http://envfor.nic.in. This shall be advertised within sevendays from the date of issue of the clearance letter, at least in two local newspaper that are</p>	<p>We have published the notice that the project has been accorded environmental clearance by the Ministry of environment & Forest in two newspaper namely as followed.</p> <ol style="list-style-type: none"> 1. Dainik Bhaskar dated 17.09.2016 2. Rajasthan Patrika dated 17.09.2016

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

(xv)	Widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office at Lucknow.	Complied.
(xvi)	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Agreed.

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

COMPLIANCE REPORT OF CONDITIONS LAID DOWN IN ENVIRONMENT CLEARANCE OF J.K. CEMENT WORKS, MANGROL

(Period October - 2020 to March-2021)

S. No.	Condition	Status
	<u>General Conditions</u>	
(ii)	<p>It is mentioned that there will be no pollution load increment due to enhancement of WHRB capacity from 20 MW to 30 MW. The following measures will be implemented to increase the waste heat recovery power generation upto 10 MW:</p> <p>Gain of 2.5 MW and 2.9 MW power generation by enhancement of boiler inlet flue temperature (from 380 480 C) by recirculation of hot air in line-2 and line respectively, i.e., total gain will be 5.4 MW.</p> <ul style="list-style-type: none"> Installing a new boiler with efficient heat recovery, as there will be higher stream recovery with temperature of 440 degree with minimization of condensing temperature, with gain of 4.6 MW. 	Agreed, The Waste Heat Recovery boiler (WHRB) is eco-friendly system & there is no increase pollution load by capacity enhancement of WHRB power generation.
(iii)	The certified EC compliance has been obtained from Regional Office (Lucknow) of MOEF&CC vide letter no. IV/ENV/R/IND167/946/2017/732 dated 09.07.2018.	Noted ,
(iv)	The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.	Agreed
(v)	<p>The proposal was considered by the Expert Appraisal Committee (Industry – I) during its 34th meeting held on 6th to 7th August, 2018. After detailed deliberations, the committee recommended for the grant of amendment to the environmental clearance with the following conditions.</p> <ul style="list-style-type: none"> The power generation from waste heat recovery boiler shall be enhanced to 20 MW to 36 MW. The PP shall under take additional greenbelt development in 5% of the total area. The PP shall construct 5 additional rainwater recharging pits 	Complying with
(vi)	The ministry considered the above recommendation of EAC and here by decided to amend the Environmental Clearance vide letter F. No. J-11011/267/2013-IAII (I) dated 08.09.2016 with the conditions as recommended by EAC in para 5 above.	Noted
(vii)	All other terms and conditions in the Environmental clearance vide letter F. No. J-11011/267/2013-IAII (I) dated 08.09.2016 are shall remain the same.	Noted

J.K. Cement WORKS, MANGROL (RAJ) (Unit-1)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
October' 2020 - March' 2021

ANNEXURE-I

DATE	NAME OF THE STACK / DUCT ATTACHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M2)	STACK GASES TEMP. (⁰ K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec.)	DUST CONC. (Mg/NM ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSION RATE (Ts/DAY)	REMARK
	October'2020								
1.10.2020	KILN + RAW MILL (BH)	5.23	416	15.38	57.62	12.6	13.3	0.063	
8.10.2020	KILN + RAW MILL (BH)	5.23	409	15.51	59.10	15.1		0.077	
15.10.2020	KILN + RAW MILL (BH)	5.23	418	16.48	61.45	13.8		0.073	
22.10.2020	KILN + RAW MILL (BH)	5.23	420	16.07	59.63	11.8		0.074	
	November'2020								
2.11.2020	KILN + RAW MILL (BH)	5.23	419	15.44	57.43	10.9	10.0	0.054	
9.11.2020	KILN + RAW MILL (BH)	5.23	415	15.62	58.66	8.7		0.044	
16.11.2020	KILN + RAW MILL (BH)	5.23	421	16.54	61.23	9.5		0.050	
23.11.2020	KILN + RAW MILL (BH)	5.23	416	16.00	59.94	10.9		0.056	
	December'2020								
1.12.2020	KILN + RAW MILL (BH)	5.23	415	16.47	61.85	8.2	11.1	0.044	
8.12.2020	KILN + RAW MILL (BH)	5.23	413	15.33	57.85	12.3		0.061	
15.12.2020	KILN + RAW MILL (BH)	5.23	409	16.97	64.67	13.6		0.076	
22.12.2020	KILN + RAW MILL (BH)	5.23	418	16.39	61.11	10.4		0.055	
	January' 2021								
04.01.2021	KILN + RAW MILL (BH)	5.23	415	15.78	59.26	15.1	12.7	0.077	
11.01.2021	KILN + RAW MILL (BH)	5.23	417	15.10	56.44	20.1		0.098	
18.01.2021	KILN + RAW MILL (BH)	5.23	421	16.20	59.97	13.8		0.072	
25.01.2021	KILN + RAW MILL (BH)	5.23	412	16.07	60.79	10.3		0.054	
	February' 2021								
01.02.2021	KILN + RAW MILL (BH)	5.23	415	14.39	54.04	11.9	10.5	0.056	
08.02.2021	KILN + RAW MILL (BH)	5.23	412	15.20	57.50	8.4		0.042	
15.02.2021	KILN + RAW MILL (BH)	5.23	413	15.79	59.59	10.5		0.054	
22.02.2021	KILN + RAW MILL (BH)	5.23	415	15.31	57.50	11.2		0.056	
	March' 2021								
06.03.2021	KILN + RAW MILL (BH)	5.23	411	16.34	61.96	15.3	11.4	0.082	
13.03.2021	KILN + RAW MILL (BH)	5.23	419	14.79	55.01	10.8		0.051	
19.03.2021	KILN + RAW MILL (BH)	5.23	424	16.05	59.00	13.6		0.069	
23.03.2021	KILN + RAW MILL (BH)	5.23	422	15.44	57.02	7.5		0.037	

	October'2020								
1.10.2020	CLINKER COOLER (ESP)	7.07	421	10.98	76.60	13.9	14.2	0.092	
8.10.2020	CLINKER COOLER (ESP)	7.07	424	11.67	80.88	11.6		0.081	
15.10.2020	CLINKER COOLER (ESP)	7.07	427	10.28	70.78	14.7		0.090	
22.10.2020	CLINKER COOLER (ESP)	7.07	422	11.36	78.47	16.5		0.112	
	November'2020								
2.11.2020	CLINKER COOLER (ESP)	7.07	423	11.01	76.05	21.5	22.9	0.141	
9.11.2020	CLINKER COOLER (ESP)	7.07	422	11.64	79.88	23.1		0.159	
16.11.2020	CLINKER COOLER (ESP)	7.07	425	10.26	70.87	20.6		0.126	
23.11.2020	CLINKER COOLER (ESP)	7.07	415	11.26	77.53	26.2		0.176	
	December'2020								
1.12.2020	CLINKER COOLER (ESP)	7.07	428	12.61	87.11	10.6	12.6	0.080	
8.12.2020	CLINKER COOLER (ESP)	7.07	425	11.89	82.68	14.4		0.103	
15.12.2020	CLINKER COOLER (ESP)	7.07	431	12.11	84.20	13.6		0.099	
22.12.2020	CLINKER COOLER (ESP)	7.07	423	12.27	84.21	11.7		0.085	
	January' 2021								
04.01.2021	CLINKER COOLER (ESP)	7.07	429	10.70	73.91	13.1	13.0	0.084	
11.01.2021	CLINKER COOLER (ESP)	7.07	431	11.10	76.43	10.6		0.070	
18.01.2021	CLINKER COOLER (ESP)	7.07	432	12.10	83.86	14.5		0.105	
25.01.2021	CLINKER COOLER (ESP)	7.07	427	11.06	76.90	12.8		0.085	
	February' 2021								
01.02.2021	CLINKER COOLER (ESP)	7.07	428	11.07	78.00	19.4	17.3	0.131	
08.02.2021	CLINKER COOLER (ESP)	7.07	423	10.55	73.85	15.5		0.099	
15.02.2021	CLINKER COOLER (ESP)	7.07	421	10.83	76.57	16.7		0.110	
22.02.2021	CLINKER COOLER (ESP)	7.07	419	10.65	74.55	17.7		0.114	
	March' 2021								
05.03.2021	CLINKER COOLER (ESP)	7.07	385	13.03	90.01	16.5	16.1	0.128	
08.03.2021	CLINKER COOLER (ESP)	7.07	400	12.99	90.03	11.1		0.086	
12.03.2021	CLINKER COOLER (ESP)	7.07	392	13.93	96.22	9.5		0.079	
18.03.2021	CLINKER COOLER (ESP)	7.07	396	13.50	93.25	15.7		0.126	

	October'2020								
1.10.2020	COAL MILL (B.F.)	0.45	345	14.10	6.28	16.9	15.2	0.009	
8.10.2020	COAL MILL (B.F.)	0.45	347	13.91	6.14	15.5		0.008	
15.10.2020	COAL MILL (B.F.)	0.45	346	14.67	6.49	13.0		0.007	
22.10.2020	COAL MILL (B.F.)	0.45	348	14.35	6.37	15.2		0.008	
	November'2020								
2.11.2020	COAL MILL (B.F.)	0.45	347	14.14	6.24	9.8	10.0	0.005	
9.11.2020	COAL MILL (B.F.)	0.45	349	13.95	6.13	7.0		0.004	
16.11.2020	COAL MILL (B.F.)	0.45	345	14.65	6.40	12.6		0.007	
23.11.2020	COAL MILL (B.F.)	0.45	352	14.43	6.34	10.5		0.006	
	December'2020								
1.12.2020	COAL MILL (B.F.)	0.45	345	13.38	5.92	17.4	14.2	0.009	
8.12.2020	COAL MILL (B.F.)	0.45	347	13.72	6.09	12.8		0.007	
15.12.2020	COAL MILL (B.F.)	0.45	343	14.20	6.28	15.5		0.008	
22.12.2020	COAL MILL (B.F.)	0.45	349	14.04	6.17	10.9		0.006	
	January' 2021								
04.01.2021	COAL MILL (B.F.)	0.45	347	13.57	6.05	7.1	9.8	0.004	
11.01.2021	COAL MILL (B.F.)	0.45	346	13.05	5.78	10.9		0.005	
18.01.2021	COAL MILL (B.F.)	0.45	349	12.16	5.40	12.0		0.006	
25.01.2021	COAL MILL (B.F.)	0.45	345	13.87	6.22	9.2		0.005	
	February' 2021								
01.02.2021	COAL MILL (B.F.)	0.45	338	12.75	5.78	17.2	13.1	0.009	
08.02.2021	COAL MILL (B.F.)	0.45	345	13.04	5.87	11.4		0.006	
15.02.2021	COAL MILL (B.F.)	0.45	343	13.15	5.94	12.1		0.006	
22.02.2021	COAL MILL (B.F.)	0.45	341	12.76	5.72	11.6		0.006	
	March' 2021								
02.03.2021	COAL MILL (B.F.)	0.45	345	13.87	6.12	11.1	12.6	0.006	
09.03.2021	COAL MILL (B.F.)	0.45	351	13.40	5.91	18.9		0.010	
19.03.2021	COAL MILL (B.F.)	0.45	342	12.78	5.69	16.3		0.008	
25.03.2021	COAL MILL (B.F.)	0.45	348	13.59	5.94	14.1		0.007	

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	October'2020								
1.10.2020	Crusher (B.F.)	0.38	326	9.53	3.31	11.9	12.8	0.003	
8.10.2020	Crusher (B.F.)	0.38	328	10.13	3.50	14.1		0.004	
15.10.2020	Crusher (B.F.)	0.38	324	10.73	3.75	11.8		0.004	
22.10.2020	Crusher (B.F.)	0.38	325	10.45	3.64	13.2		0.004	
	November'2020								
02.11.2020	Crusher (B.F.)	0.38	327	10.66	3.69	14.7	13.3	0.005	
09.11.2020	Crusher (B.F.)	0.38	325	10.09	3.52	11.0		0.003	
16.11.2020	Crusher (B.F.)	0.38	329	10.92	3.76	9.7		0.003	
23.11.2020	Crusher (B.F.)	0.38	327	9.87	3.42	17.7		0.005	
	December'2020								
1.12.2020	Crusher (B.F.)	0.38	325	10.51	3.66	14.3	14.4	0.005	
8.12.2020	Crusher (B.F.)	0.38	323	9.81	3.44	17.1		0.005	
15.12.2020	Crusher (B.F.)	0.38	329	10.33	3.56	11.9		0.004	
22.12.2020	Crusher (B.F.)	0.38	325	10.74	3.74	14.2		0.005	
	January' 2021								
04.01.2021	Crusher (B.F.)	0.38	316	10.27	3.62	8.2	10.5	0.003	
11.01.2021	Crusher (B.F.)	0.38	318	10.80	3.85	15.1		0.005	
18.01.2021	Crusher (B.F.)	0.38	319	11.10	3.90	9.2		0.003	
25.01.2021	Crusher (B.F.)	0.38	321	9.81	3.48	12.8		0.004	
	February' 2021								
01.02.2021	Crusher (B.F.)	0.38	316	10.42	3.73	19.1	13.8	0.006	
08.02.2021	Crusher (B.F.)	0.38	318	10.34	3.68	11.4		0.004	
15.02.2021	Crusher (B.F.)	0.38	319	9.81	3.48	8.3		0.002	
22.02.2021	Crusher (B.F.)	0.38	321	10.21	3.60	16.2		0.005	
	March' 2021								
01.03.2021	Crusher (B.F.)	0.38	318	10.10	3.60	10.6	13.2	0.003	
06.03.2021	Crusher (B.F.)	0.38	325	9.52	3.32	12.2		0.003	
10.03.2021	Crusher (B.F.)	0.38	321	10.44	3.68	11.9		0.004	
22.03.2021	Crusher (B.F.)	0.38	320	10.54	3.73	15.8		0.005	

G. Singh

J.K. Cement WORKS, MANGROL (RAJ) (Unit-2)
DATA SHEET FOR PARTICULATE MATTER EMISSION FROM POINT SOURCE
October' 2020 - March' 2021

DATE	NAME OF THE STACK / DUCT ATTECHED WITH UNIT AND MONTH	CROSS SECTIONAL AREA OF DUCT (M2)	STACK GASES TEMP. (⁰ K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ /Sec.)	DUST CONC. (Mg/NM ³)	MEAN DUST CONC. (Mg/NM ³)	EMISSION RATE (Ts/DAY)	REMARK
	October' 2020								
02-10-2020	KILN + RAW MILL (B.F.)	14.18	419.00	15.17	152.99	10.7	9.9	0.141	
09-10-2020	KILN + RAW MILL (B.F.)	14.18	421.00	14.83	148.85	9.0		0.116	
16-10-2020	KILN + RAW MILL (B.F.)	STOP						STOP	
23-10-2020	KILN + RAW MILL (B.F.)								
	November' 2020								
06-11-2020	KILN + RAW MILL (B.F.)	STOP					9.0	STOP	
13-11-2020	KILN + RAW MILL (B.F.)								
20-11-2020	KILN + RAW MILL (B.F.)								
27-11-2020	KILN + RAW MILL (B.F.)							14.18	427.00
	December' 2020								
03-12-2020	KILN + RAW MILL (B.F.)	14.18	428.00	15.17	149.77	13.3	13.8	0.172	
10-12-2020	KILN + RAW MILL (B.F.)	14.18	423.00	15.40	153.84	10.6		0.141	
17-12-2020	KILN + RAW MILL (B.F.)	14.18	425.00	14.51	144.27	14.0		0.175	
24-12-2020	KILN + RAW MILL (B.F.)	14.18	422.00	14.96	149.80	17.3		0.224	
	January' 2021								
05-01-2021	KILN + RAW MILL (B.F.)	14.18	411.00	14.27	146.72	15.8	12.7	0.200	
12-01-2021	KILN + RAW MILL (B.F.)	14.18	412.00	14.67	150.46	11.6		0.151	
19-01-2021	KILN + RAW MILL (B.F.)	14.18	414.00	14.49	147.90	16.1		0.206	
27-01-2021	KILN + RAW MILL (B.F.)	14.18	415.00	14.94	152.12	9.5		0.125	
	February' 2021								
02-02-2021	KILN + RAW MILL (B.F.)	14.18	412.0	13.77	141.23	15.8	14.2	0.193	
09-02-2021	KILN + RAW MILL (B.F.)	14.18	415.0	14.11	143.67	11.2		0.139	
16-02-2021	KILN + RAW MILL (B.F.)	14.18	408.0	14.44	149.55	15.6		0.202	
27-01-2021	KILN + RAW MILL (B.F.)	STOP						STOP	
	March' 2021								
03.03.2021	KILN + RAW MILL (B.F.)	14.18	425.00	15.76	220.52	11.8	11.3	0.225	
09.03.2021	KILN + RAW MILL (B.F.)	14.18	422.00	16.11	223.93	14.7		0.284	
19.03.2021	KILN + RAW MILL (B.F.)	14.18	426.00	16.08	222.78	9.6		0.185	
24.03.2021	KILN + RAW MILL (B.F.)	14.18	428.00	16.52	226.65	9.1		0.178	

	October' 2020						11.0		
02-10-2020	CLINKER COOLER (ESP)	8.80	421.00	13.32	113.04	10.9		0.106	
09-10-2020	CLINKER COOLER (ESP)	8.80	423.00	13.72	117.20	11.1		0.112	
16-10-2020	CLINKER COOLER (ESP)	STOP						STOP	
23-10-2020	CLINKER COOLER (ESP)								
	November' 2020						14.0		
06-11-2020	CLINKER COOLER (ESP)	STOP						STOP	
13-11-2020	CLINKER COOLER (ESP)								
20-11-2020	CLINKER COOLER (ESP)								
27-11-2020	CLINKER COOLER (ESP)	8.80	433.00	15.21	129.08	14.0		0.156	
	December' 2020						11.6		
03-12-2020	CLINKER COOLER (ESP)	8.80	433.00	13.70	117.03	10.4		0.105	
10-12-2020	CLINKER COOLER (ESP)	8.80	431.00	13.48	116.67	13.3		0.134	
17-12-2020	CLINKER COOLER (ESP)	8.80	429.00	14.05	121.60	11.8		0.124	
24-12-2020	CLINKER COOLER (ESP)	8.80	425.00	13.33	114.61	10.8		0.107	
	January' 2021						17.8		
05-01-2021	CLINKER COOLER (ESP)	8.80	419.00	13.05	112.20	18.7		0.181	
12-01-2021	CLINKER COOLER (ESP)	8.80	422.00	13.34	113.58	9.3		0.091	
19-01-2021	CLINKER COOLER (ESP)	8.80	427.00	14.10	120.44	13.4		0.139	
27-01-2021	CLINKER COOLER (ESP)	8.80	425.00	12.95	109.90	16.8		0.160	
	February' 2021						15.4		
02-02-2021	CLINKER COOLER (ESP)	8.80	421	13.51	117.70	13.8		0.140	
09-02-2021	CLINKER COOLER (ESP)	8.80	419.00	13.29	115.02	15.4		0.153	
16-02-2021	CLINKER COOLER (ESP)	8.80	423.00	13.78	120.46	17.1		0.178	
STOP	CLINKER COOLER (ESP)	STOP						STOP	
	March' 2021						12.8		
01.03.2021	CLINKER COOLER (ESP)	8.80	391.00	14.30	124.17	18.3		0.196	
08.03.2021	CLINKER COOLER (ESP)	8.80	397.00	15.28	131.81	13.0		0.148	
16.03.2021	CLINKER COOLER (ESP)	8.80	402.00	14.61	124.80	8.8		0.095	
22.03.2021	CLINKER COOLER (ESP)	8.80	388.00	14.96	128.63	10.9		0.121	

	October' 2020								
02-10-2020	COAL MILL (B.F.)	2.00	351.00	12.09	23.63	12.4	13.8	0.025	
09-10-2020	COAL MILL (B.F.)	2.00	354.00	12.79	24.83	15.2		0.033	
16-10-2020	COAL MILL (B.F.)	STOP						STOP	
23-10-2020	COAL MILL (B.F.)								
	November' 2020								
06-11-2020	COAL MILL (B.F.)	STOP					13.9	STOP	
13-11-2020	COAL MILL (B.F.)								
20-11-2020	COAL MILL (B.F.)								
27-11-2020	COAL MILL (B.F.)	2.00	359.00	13.52	26.42	13.9		0.032	
	December' 2020								
03-12-2020	COAL MILL (B.F.)	2.00	351.00	13.80	27.14	17.1	15.8	0.040	
10-12-2020	COAL MILL (B.F.)	2.00	355.00	14.35	28.32	16.0		0.039	
17-12-2020	COAL MILL (B.F.)	2.00	349.00	13.61	26.77	14.7		0.034	
24-12-2020	COAL MILL (B.F.)	2.00	353.00	13.99	27.70	15.3		0.037	
	January' 2021								
05-01-2021	COAL MILL (B.F.)	2.00	353.00	11.95	23.51	10.4	12.3	0.021	
12-01-2021	COAL MILL (B.F.)	2.00	360.00	12.35	24.21	5.0		0.010	
19-01-2021	COAL MILL (B.F.)	2.00	357.00	12.52	24.31	9.5		0.020	
27-01-2021	COAL MILL (B.F.)	2.00	354.00	12.58	24.58	14.1		0.030	
	February' 2021								
02-02-2021	COAL MILL (B.F.)	2.00	351.00	12.03	23.98	16.0	14.4	0.033	
09-02-2021	COAL MILL (B.F.)	2.00	353.00	12.29	24.34	13.2		0.028	
16-02-2021	COAL MILL (B.F.)	2.00	349.00	11.77	23.54	14.1		0.029	
STOP	COAL MILL (B.F.)	STOP						STOP	
	March' 2021								
04.03.2021	COAL MILL (B.F.)	2.00	354.00	15.07	29.74	16.8	14.3	0.043	
12.03.2021	COAL MILL (B.F.)	2.00	360.00	15.69	30.76	10.0		0.027	
16.03.2021	COAL MILL (B.F.)	2.00	367.00	15.52	30.23	14.3		0.037	
20.03.2021	COAL MILL (B.F.)	2.00	362.00	15.55	30.39	15.9		0.042	

[illegible]

	October' 2020						12.0		
02-10-2020	CRUSHER BAG FILTER	1.23	329.00	11.54	12.86	11.3		0.013	
09-10-2020	CRUSHER BAG FILTER	1.23	331.00	11.90	13.18	12.7		0.014	
16-10-2020	CRUSHER BAG FILTER	STOP						STOP	
23-10-2020	CRUSHER BAG FILTER								
	November' 2020						15.7		
06-11-2020	CRUSHER BAG FILTER	STOP						STOP	
13-11-2020	CRUSHER BAG FILTER								
20-11-2020	CRUSHER BAG FILTER								
27-11-2020	CRUSHER BAG FILTER	1.23	335.00	12.02	13.15	15.7		0.018	
	December' 2020						12.9		
03-12-2020	CRUSHER BAG FILTER	1.23	327.00	12.34	13.83	14.9		0.018	
10-12-2020	CRUSHER BAG FILTER	1.23	327.00	12.24	13.72	14.5		0.017	
17-12-2020	CRUSHER BAG FILTER	1.23	329.00	12.07	13.45	10.7		0.012	
24-12-2020	CRUSHER BAG FILTER	1.23	328.00	12.81	14.32	11.6		0.014	
	January' 2021						13.1		
05-01-2021	CRUSHER BAG FILTER	1.23	329.00	11.10	12.37	15.0		0.016	
12-01-2021	CRUSHER BAG FILTER	1.23	331.00	11.52	12.76	10.3		0.011	
19-01-2021	CRUSHER BAG FILTER	1.23	332.00	11.59	12.80	14.0		0.015	
28-01-2021	CRUSHER BAG FILTER	1.23	331.00	11.35	12.57	11.2		0.012	
	February' 2021						16.2		
02-02-2021	CRUSHER BAG FILTER	1.23	319	11.36	13.05	17.40		0.020	
09-02-2021	CRUSHER BAG FILTER	1.23	321.00	11.72	13.38	16.1		0.019	
16-02-2021	CRUSHER BAG FILTER	1.23	320.00	11.49	13.16	15.1		0.017	
23-02-2021	CRUSHER BAG FILTER	STOP						STOP	
	March' 2021						13.4		
04.03.2021	CRUSHER BAG FILTER	1.23	327.00	12.49	15.16	18.6		0.024	
09.03.2021	CRUSHER BAG FILTER	1.23	326.00	12.91	15.57	9.4		0.013	
15.03.2021	CRUSHER BAG FILTER	1.23	328.00	12.05	14.53	13.5		0.017	
25.03.2021	CRUSHER BAG FILTER	1.23	324.00	12.13	14.48	12.2		0.015	

	October' 2020						10.7		
05-10-2020	PACKER -I BAG FILTER	0.785	327.00	12.84	9.85	7.9		0.007	
10-10-2020	PACKER -I BAG FILTER	0.785	329.00	12.48	9.51	13.4		0.011	
19-10-2020	PACKER -I BAG FILTER	0.785	331.00	12.06	9.34	9.9		0.008	
26-10-2020	PACKER -I BAG FILTER	0.785	333.00	12.45	9.49	11.5		0.009	
	November' 2020						12.2		
09-11-2020	PACKER -I BAG FILTER	0.785	325.00	12.30	9.31	12.8		0.010	
16-11-2020	PACKER -I BAG FILTER	0.785	329.00	12.68	9.73	10.8		0.009	
23-11-2020	PACKER -I BAG FILTER	0.785	331.00	12.87	9.94	11.6		0.010	
30-11-2020	PACKER -I BAG FILTER	0.785	325.00	12.45	9.49	13.5		0.011	
	December' 2020						12.7		
04-12-2020	PACKER -I BAG FILTER	0.785	325.00	11.25	8.83	13.6		0.010	
11-12-2020	PACKER -I BAG FILTER	0.785	323.00	11.65	9.18	12.9		0.010	
18-12-2020	PACKER -I BAG FILTER	0.785	321.00	11.51	9.04	13.2		0.010	
25-12-2020	PACKER -I BAG FILTER	0.785	323.00	12.27	9.66	11.1		0.009	
	January' 2021						10.8		
07-01-2021	PACKER -I BAG FILTER	0.785	323.00	12.27	9.50	6.7		0.005	
14-01-2021	PACKER -I BAG FILTER	0.785	327.00	12.14	9.43	10.8		0.009	
21-01-2021	PACKER -I BAG FILTER	0.785	323.00	12.76	9.85	12.3		0.010	
28-01-2021	PACKER -I BAG FILTER	0.785	326.00	12.57	9.77	13.2		0.011	
	February' 2021						12.8		
05-02-2021	PACKER -I BAG FILTER	0.785	323.00	12.27	9.50	9.4		0.008	
12-02-2021	PACKER -I BAG FILTER	0.785	327.00	12.14	9.43	16.2		0.013	
19-02-2021	PACKER -I BAG FILTER	0.785	323.00	12.76	9.85	11.9		0.010	
26-02-2021	PACKER -I BAG FILTER	0.785	326.00	12.57	9.77	13.6		0.011	
	March' 2021						12.1		
05.03.2021	PACKER -I BAG FILTER	0.785	331.00	12.16	9.33	13.9		0.011	
09.03.2021	PACKER -I BAG FILTER	0.785	334.00	12.83	9.91	8.6		0.007	
16.03.2021	PACKER -I BAG FILTER	0.785	336.00	11.99	9.17	11.0		0.009	
26.03.2021	PACKER -I BAG FILTER	0.785	329.00	12.07	9.23	15.0		0.012	

	October' 2020						11.1		
05-10-2020	PACKER -2 BAG FILTER	0.785	329.00	13.02	9.99	8.3		0.007	
10-10-2020	PACKER -2 BAG FILTER	0.785	333.00	13.44	10.24	16.3		0.014	
19-10-2020	PACKER -2 BAG FILTER	0.785	331.00	12.72	9.79	9.5		0.008	
26-10-2020	PACKER -2 BAG FILTER	0.785	333.00	13.20	10.03	10.3		0.009	
	November' 2020						13.6		
09-11-2020	PACKER -2 BAG FILTER	0.785	327.00	12.84	9.85	11.0		0.009	
16-11-2020	PACKER -2 BAG FILTER	0.785	323.00	13.09	9.97	16.6		0.014	
23-11-2020	PACKER -2 BAG FILTER	0.785	329.00	12.58	9.52	14.9		0.012	
30-11-2020	PACKER -2 BAG FILTER	0.785	331.00	13.06	9.95	11.9		0.010	
	December' 2020						13.9		
04-12-2020	PACKER -2 BAG FILTER	0.785	324.00	11.82	9.25	15.9		0.013	
11-12-2020	PACKER -2 BAG FILTER	0.785	322.00	11.47	9.03	14.4		0.011	
18-12-2020	PACKER -2 BAG FILTER	0.785	321.00	11.82	9.28	11.7		0.009	
25-12-2020	PACKER -2 BAG FILTER	0.785	325.00	12.10	9.56	13.4		0.011	
	January' 2021						11.5		
07-01-2021	PACKER -2 BAG FILTER	0.785	324.00	12.78	9.87	8.8		0.008	
14-01-2021	PACKER -2 BAG FILTER	0.785	327.00	12.64	9.82	16.6		0.014	
21-01-2021	PACKER -2 BAG FILTER	0.785	323.00	12.42	9.68	9.2		0.008	
28-01-2021	PACKER -2 BAG FILTER	0.785	325.00	12.15	9.38	11.3		0.009	
	February' 2021						13.2		
05-02-2021	PACKER -2 BAG FILTER	0.785	324.00	12.78	9.87	14.5		0.012	
12-02-2021	PACKER -2 BAG FILTER	0.785	327.00	12.64	9.82	17.8		0.015	
19-02-2021	PACKER -2 BAG FILTER	0.785	323.00	12.42	9.68	9.2		0.008	
26-02-2021	PACKER -2 BAG FILTER	0.785	325.00	12.15	9.38	11.3		0.009	
	March' 2021						13.0		
04-03-2021	PACKER -2 BAG FILTER	0.785	327.00	11.93	9.15	13.1		0.010	
13-03-2021	PACKER -2 BAG FILTER	0.785	336.00	11.66	8.94	9.5		0.007	
17-03-2021	PACKER -2 BAG FILTER	0.785	331.00	12.47	9.50	17.4		0.014	
24-03-2021	PACKER -2 BAG FILTER	0.785	333.00	11.39	8.62	11.9		0.009	

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	October' 2020								
05-10-2020	PACKER -4 BAG FILTER	0.79	331.00	12.92	9.84	13.1	15.2	0.011	
10-10-2020	PACKER -4 BAG FILTER	0.79	329.00	12.48	9.45	14.0		0.011	
19-10-2020	PACKER -4 BAG FILTER	0.79	327.00	12.49	9.64	15.8		0.013	
26-10-2020	PACKER -4 BAG FILTER	0.79	332.00	13.42	10.23	18.0		0.016	
	November' 2020								
09-11-2020	PACKER -4 BAG FILTER	0.785	331.00	13.16	9.96	7.4	10.1	0.006	
16-11-2020	PACKER -4 BAG FILTER	0.785	329.00	12.48	9.57	8.7		0.007	
23-11-2020	PACKER -4 BAG FILTER	0.785	327.00	13.27	10.18	10.1		0.009	
30-11-2020	PACKER -4 BAG FILTER	0.785	332.00	12.79	9.75	14.2		0.012	
	December' 2020								
04-12-2020	PACKER -4 BAG FILTER	STOP						0.000	
11-12-2020	PACKER -4 BAG FILTER							0.000	
18-12-2020	PACKER -4 BAG FILTER							0.000	
25-12-2020	PACKER -4 BAG FILTER							0.000	
	January' 2021								
07-01-2021	PACKER -4 BAG FILTER	STOP					12.3	STOP	
14-01-2021	PACKER -4 BAG FILTER	0.785	327.00	12.64	9.76	8.3		0.007	
21-01-2021	PACKER -4 BAG FILTER	0.785	325.00	12.80	9.95	13.6		0.012	
28-01-2021	PACKER -4 BAG FILTER	0.785	329.00	13.02	10.02	15.1		0.013	
	February' 2021								
05-02-2021	PACKER -4 BAG FILTER	STOP					16.2	STOP	
12-02-2021	PACKER -4 BAG FILTER	0.785	327.00	12.64	9.76	18.0		0.015	
19-02-2021	PACKER -4 BAG FILTER	0.785	325.00	12.80	9.95	14.7		0.013	
26-02-2021	PACKER -4 BAG FILTER	0.785	329.00	13.02	10.02	15.9		0.014	
	March' 2021								
02.03.2021	PACKER -4 BAG FILTER	0.785	325.00	11.89	9.24	18.7	14.8	0.015	
10.03.2021	PACKER -4 BAG FILTER	0.785	328.00	12.36	9.48	12.8		0.010	
16.03.2021	PACKER -4 BAG FILTER	0.785	330.00	12.14	9.28	17.0		0.014	
26.03.2021	PACKER -4 BAG FILTER	0.785	327.00	12.19	9.26	10.6		0.008	

G. Singh

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

October' 2020 - March' 2021[illegible]

[illegible]

	October' 2020								
03-10-2020	COAL MILL - 3 BAG HOUSE	3.94	345	9.11	34.62	15.8	12.6	0.047	
10-10-2020	COAL MILL - 3 BAG HOUSE	3.94	347	8.84	34.03	10.9		0.032	
17-10-2020	COAL MILL - 3 BAG HOUSE	3.94	341	9.13	34.92	12.9		0.039	
24-10-2020	COAL MILL - 3 BAG HOUSE	3.94	347	9.63	37.07	10.6		0.034	
	November' 2020								
05-11-2020	COAL MILL - 3 BAG HOUSE	3.94	346	7.45	28.87	8.5	9.0	0.021	
12-11-2020	COAL MILL - 3 BAG HOUSE	3.94	351	7.68	29.56	10.9		0.028	
19-11-2020	COAL MILL - 3 BAG HOUSE	3.94	345	8.82	34.06	8.8		0.026	
26-11-2020	COAL MILL - 3 BAG HOUSE	3.94	353	8.37	32.01	7.8		0.022	
	December' 2020								
07-12-2020	COAL MILL - 3 BAG HOUSE	3.94	345	7.78	30.15	16.6	12.7	0.043	
14-12-2020	COAL MILL - 3 BAG HOUSE	3.94	342	7.14	27.76	12.1		0.029	
21-12-2020	COAL MILL - 3 BAG HOUSE	3.94	343	7.59	29.61	11.6		0.030	
28-12-2020	COAL MILL - 3 BAG HOUSE	3.94	347	7.14	28.04	10.3		0.025	
	January' 2021								
06-01-2021	COAL MILL - 3 BAG HOUSE	3.94	347	7.97	30.99	13.3	11.9	0.036	
13-01-2021	COAL MILL - 3 BAG HOUSE	3.94	351	8.35	32.79	12.2		0.035	
20-01-2021	COAL MILL - 3 BAG HOUSE	3.94	343	9.01	34.91	13.0		0.039	
27-01-2021	COAL MILL - 3 BAG HOUSE	3.94	345	8.51	33.20	9.1		0.026	
	February' 2021								
06-02-2021	COAL MILL - 3 BAG HOUSE	3.94	349	7.48	29.18	9.9	12.5	0.025	
13-02-2021	COAL MILL - 3 BAG HOUSE	3.94	347	7.19	28.23	15.1		0.037	
20-02-2021	COAL MILL - 3 BAG HOUSE	3.94	351	7.14	27.76	10.7		0.026	
27-02-2021	COAL MILL - 3 BAG HOUSE	3.94	347	7.72	30.11	14.3		0.037	
	March' 2021								
05-03-2021	COAL MILL - 3 BAG HOUSE	3.94	341	9.13	35.15	18.3	11.3	0.056	
11-03-2021	COAL MILL - 3 BAG HOUSE	3.94	348	8.31	31.78	8.3		0.023	
17-03-2021	COAL MILL - 3 BAG HOUSE	3.94	354	8.85	34.18	7.2		0.021	
24-03-2021	COAL MILL - 3 BAG HOUSE	3.94	345	8.96	34.27	11.3		0.033	

J.K. Cement WORKS, Mangrol (RAJ)

25 MW THERMAL POWER PLANT

DATA SHEET FOR THE PARTICULATE MATTER EMISSION FROM POINT SOURCE

DATE	NAME OF THE STACK	CROSS SECTIONAL AREA OF DUCT (M ²)	STACK GASES TEMP. (K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ / Sec.)	DUST CONC. (Mg/ NM3)	MEAN DUST CONC. (Mg/ NM3)	EMISSION RATE (Ts/ DAY)	REMARKS
20.10.2020	COAL CRUSHER BAG FILTER	0.496	332	11.49	5.46	14	14	0.007	
11-11-2020		0.496	300	12.21	6.10	25.4	25.4	0.013	
18-12-2020		0.496	330	11.25	5.58	11	11	0.005	
18-01-2021		0.496	323	11.00	5.49	13	13	0.006	
07-02-2021		0.496	319	13.28	4.93	16	16	0.007	
18-03-2021		0.496	321	11.25	5.45	11	11	0.005	

G. Singh

J.K. Cement WORKS, Mangrol (RAJ)

25 MW THERMAL POWER PLANT

DATA SHEET FOR THE PARTICULATE MATTER EMISSION FROM POINT SOURCE

DATE	NAME OF THE STACK	CROSS SECTIONAL AREA OF DUCT (M ²)	STACK GASES TEMP. (K)	STACK GASES VELOCITY (M / Sec.)	FLOW OF GASES IN STACK (NM ³ / Sec.)	DUST CONC. (Mg/ NM3)	MEAN DUST CONC. (Mg/ NM3)	EMISSION RATE (Ts/ DAY)	REMARKS
20-10-2020	BOILER ESP	10.69	390	7.01	71.80	16	16	0.099	
11-11-2020		10.69	369	10.90	115.36	28	28	0.279	
18-12-2020		10.69	393	7.35	78.57	14	14	0.095	
18-01-2021		10.69	390	7.50	80.72	16	16	0.112	
07-02-2021		10.69	396	8.43	89.22	17.1	17.1	0.132	
18-03-2021		10.69	392	7.25	75.72	14	14	0.092	

G. Singh

Mitra S.K. Private Limited

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W: www.mitrask.com



TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1544

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00523

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 11.40 A.M

Sampling Location : Kiln & Raw mill stack (Line - 1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 88.3 m |
| 2. Diameter of the Stack at sampling point | : 2.6 m |
| 3. Area of Stack | : 5.30 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|---------|------------|
| 1. Temperature of emission (°C) | : 133 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 728 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 14.49 | EPA Part 2 |
| 4. Concentration of Sulphur di oxide (mg/Nm ³) | : 28.1 | EPA Part-6 |
| 5. Concentration of Nitrogen di oxide (mg/Nm ³) | : 695.4 | EPA Part-7 |
| 6. Concentration of Particulate Matters (mg/Nm ³) | : 13.1 | 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

Shrachi Center (5th Floor)
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TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1545

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00524

Sample Description : Stack Emission

Date & Time of Sampling: 25.11.2020 at 10.30 A.M

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

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 158.5 m |
| 2. Diameter of the Stack at sampling point | : 4.25 m |
| 3. Area of Stack | : 14.18 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 129	EPA Part 2
2. Barometric pressure (mm of Hg)	: 731	EPA Part 2
3. Velocity of gas (m/sec)	: 15.2	EPA Part 2
4. Concentration of Sulphur di oxide (mg/Nm ³)	: 20.2	EPA Part-6
5. Concentration of Nitrogen di oxide (mg/Nm ³)	: 652.1	EPA Part-7
6. Concentration of Particulate Matters (mg/Nm ³)	: 15.6	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

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 Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1546

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00525

Sample Description : Stack Emission

Date & Time of Sampling: 26.11.2020 at 10.40 P.M

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

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 148 m |
| 2. Diameter of the Stack at sampling point | : 4.0 m |
| 3. Area of Stack | : 12.56 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 131	EPA Part 2
2. Barometric pressure (mm of Hg)	: 729	EPA Part 2
3. Velocity of gas (m/sec)	: 15.17	EPA Part 2
4. Concentration of Sulphur di oxide (mg/Nm ³)	: 17.15	EPA Part-6
5. Concentration of Nitrogen di oxide (mg/Nm ³)	: 260.2	EPA Part-7
6. Concentration of Particulate Matters (mg/Nm ³)	: 19.25	EPA Part-5

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1551

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00530

Sample Description : Stack Emission

Date & Time of Sampling: 23.11.2020 at 03.15 P.M

Sampling Location : Coal Mill (Line -1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 0.7 m |
| 3. Area of Stack | : 0.45 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 69 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 730 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 13.82 | EPA Part 2 |
| 4. 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 filter

E. Remarks : NIL

Report Prepared by :

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1552

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00531

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 01.45 P.M

Sampling Location : Coal Mill (Line – 2)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 51.2 m |
| 2. Diameter of the Stack at sampling point | : 1.6 m |
| 3. Area of Stack | : 2.01 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|---------|------------|
| 1. Temperature of emission (°C) | : 65 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 728 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 13.52 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 16.21 | 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 :

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Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1553

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00532

Sample Description : Stack Emission

Date & Time of Sampling: 12.11.2020 at 09.30 A.M

Sampling Location : Coal Mill (Line – 3)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 62.2 m |
| 2. Diameter of the Stack at sampling point | : 2.24 m |
| 3. Area of Stack | : 3.94 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 67	EPA Part 2
2. Barometric pressure (mm of Hg)	: 729	EPA Part 2
3. Velocity of gas (m/sec)	: 13.57	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 12.44	EPA Part-5

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1554

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00533

Sample Description : Stack Emission

Date & Time of Sampling: 23.11.2020 at 11.35 A.M

Sampling Location : Clinker Cooler (Line - 1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 40.0 m |
| 2. Diameter of the Stack at sampling point | : 3.00 m |
| 3. Area of Stack | : 7.065 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 104 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 729 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 11.27 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 26.8 | EPA Part-5 |

D. Pollution control device

Details of pollution control devices attached with the stack : Electrostatic Precipitator

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1555

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00534

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 12.40 P.M

Sampling Location : Clinker Cooler (Line – 2)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 48.9 m |
| 2. Diameter of the Stack at sampling point | : 3.35 m |
| 3. Area of Stack | : 8.81 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 103 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 728 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 14.03 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 21.2 | EPA Part-5 |

D. Pollution control device

Details of pollution control devices attached with the stack : Electrostatic Precipitator

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1556

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00535

Sample Description : Stack Emission

Date & Time of Sampling: 25.11.2020 at 01.30 P.M

Sampling Location : Clinker Cooler (Line – 3)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 45.3 m |
| 2. Diameter of the Stack at sampling point | : 3.5 m |
| 3. Area of Stack | : 9.61 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|---------|------------|
| 1. Temperature of emission (°C) | : 110 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 729 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 11.82 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 21.6 | EPA Part-5 |

D. Pollution control device

Details of pollution control devices attached with the stack : Electrostatic Precipitator

E. Remarks : NIL

Report Prepared by :

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1558

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00537

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 02.55 P.M.

Sampling Location : Cement Mill 2 (Line - 1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 35.0 m |
| 2. Diameter of the Stack at sampling point | : 1.1 m |
| 3. Area of Stack | : 0.950 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 86 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 728 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 11.44 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 10.5 | 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 Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1559

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00538

Sample Description : Stack Emission

Date & Time of Sampling: 25.11.2020 at 11.20 A.M.

Sampling Location : Cement Mill 3 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 56.0 m |
| 2. Diameter of the Stack at sampling point | : 2.9 m |
| 3. Area of Stack | : 6.60. m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 89 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 730 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 11.51 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 18.4 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1560

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00539

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 03.15 P.M

Sampling Location : Cement Mill 4 (Line – 3)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 60.0 m |
| 2. Diameter of the Stack at sampling point | : 2.8 m |
| 3. Area of Stack | : 6.15 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 91 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 728 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 11.28 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 17.2 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1561

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00540

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 04.25 P.M

Sampling Location : Packer 1 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 1 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Concentration of Particulate Matters (mg/Nm ³) | : 12.4 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1562

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00541

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 05.30 P.M

Sampling Location : Packer 2 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 2 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|--------|------------|
| 1. Concentration of Particulate Matters (mg/Nm ³) | : 11.4 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

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TEST REPORT

Name & Address of the Customer :

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Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1563

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00542

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 06.40 P.M

Sampling Location : Packer 3 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 3 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|--------|------------|
| 1. Concentration of Particulate Matters (mg/Nm ³) | : 16.2 | 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

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

Name & Address of the Customer :

J.K.Cement Works Mangrol

Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1564

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00543

Sample Description : Stack Emission

Date & Time of Sampling: 24.11.2020 at 07.55 P.M

Sampling Location : Packer 4 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 4 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Concentration of Particulate Matters (mg/Nm ³) | : 19.4 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1565

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00544

Sample Description : Flue Gas Monitoring

Sampling Location : Coal Crusher Plant - 1 (Mangrol)

Date & Time of Sampling : 23.11.2020 at 12.40 PM

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 0.40 m |
| 3. Height of the sampling point from GL | : 7.0 m |
| 4. Area of Stack | : 0.127 m ² |

C. Analysis/Characteristic of stack

1. Fuel used : Coal

D. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 27 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 729 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 12.21 | EPA Part 2 |
| 5. Conc. of Particulate Matters (mg/Nm ³) at 6% O ₂ on dry basis | : 25.4 | EPA Part-17 |

E. Pollution control device

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

F. Remarks : NIL

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1702

Date : 06.01.2020

Sample No. : MSKGL/ED/2020-21/12/01634

Sample Description : Flue Gas Monitoring

Sampling Location : 25 MW Thermal Power Plant (Mangrol)

Date & Time of Sampling : 11.11.2020 at 10.15 a.m.

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|--------------------|
| 1. Stack connected to | : Boiler |
| 2. Emission due to | : Power Generation |
| 3. Material of construction of Stack | : RCC |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |
| 6. Generation Capacity | : 25 MW |

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 110.0 m |
| 2. Diameter of the Stack at sampling point | : 3.69 m |
| 3. Height of the sampling point from GL | : 38.10 m |
| 4. Area of Stack | : 10.68 m ² |

C. Analysis/Characteristic of stack

1. Fuel used : Coal

D. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 123	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 10.90	EPA Part 2
4. Concentration of Oxygen (% v/v)	: 6.9	IS 13270:1992, Reaf:2014
5. Conc. of Particulate Matters (mg/Nm ³) at 6% O ₂ on dry basis	: 28.0	EPA Part-17

E. Pollution control device

Details of pollution control devices attached with the stack : Electrostatic precipitator

F. Remarks : NIL

Report prepared by :



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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works Mangrol

Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1566

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00545

Sample Description : Stack Emission

Date & Time of Sampling: 23.11.2020 at 02.00 P.M

Sampling Location : Limestone Crusher (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

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

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 28 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 730 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 13.06 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 21.5 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2172

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00215

Sample Description : Stack Emission

Date & Time of Sampling: 08.02.2020 at 11.30 A.M

Sampling Location : Kiln & Raw mill stack (Line - 1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 88.3 m |
| 2. Diameter of the Stack at sampling point | : 2.6 m |
| 3. Area of Stack | : 5.30 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|---------|------------|
| 1. Temperature of emission (°C) | : 136 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 736 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 14.63 | EPA Part 2 |
| 4. Concentration of Sulphur di oxide (mg/Nm ³) | : 18.3 | EPA Part-6 |
| 5. Concentration of Nitrogen di oxide (mg/Nm ³) | : 680.1 | EPA Part-7 |
| 6. Concentration of Particulate Matters (mg/Nm ³) | : 13.7 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2173

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00216

Sample Description : Stack Emission

Date & Time of Sampling: 09.02.2021 at 10.10 A.M

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

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

1. Height of the stack from ground level	: 158.5 m
2. Diameter of the Stack at sampling point	: 4.25 m
3. Area of Stack	: 14.18 m ²

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 134	EPA Part 2
2. Barometric pressure (mm of Hg)	: 730	EPA Part 2
3. Velocity of gas (m/sec)	: 14.96	EPA Part 2
4. Concentration of Sulphur di oxide (mg/Nm ³)	: 9.5	EPA Part-6
5. Concentration of Nitrogen di oxide (mg/Nm ³)	: 677.3	EPA Part-7
6. 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 House
--	-------------

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2174

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00217

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 10.10 A.M

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

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Kiln & Raw mill	
2.Emission due to	: Burning of Limestone & additive	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1.Height of the stack from ground level	: 148 m	
2.Diameter of the Stack at sampling point	: 4.0 m	
3.Area of Stack	: 12.56 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1.Temperature of emission (°C)	: 133	EPA Part 2
2.Barometric pressure (mm of Hg)	: 734	EPA Part 2
3.Velocity of gas (m/sec)	: 14.75	EPA Part 2
4.Concentration of Sulphur di oxide (mg/Nm ³)	: 18.0	EPA Part-6
5.Concentration of Nitrogen di oxide (mg/Nm ³)	: 487.6	EPA Part-7
6.Concentration of Particulate Matters (mg/Nm ³)	: 14.5	EPA Part-5
D. <u>Pollution control device</u>		
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 Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2186

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00229

Sample Description : Stack Emission

Date & Time of Sampling: 08.02.2021 at 12.30 P.M

Sampling Location : Coal Mill (Line -1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 0.7 m |
| 3. Area of Stack | : 0.45 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Temperature of emission (°C) | : 67 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 735 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 13.54 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 16.9 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2187

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00230

Sample Description : Stack Emission

Date & Time of Sampling: 09.02.2021 at 11.00 A.M

Sampling Location : Coal Mill (Line - 2)

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Coal mill	
2.Emission due to	: Grinding of coal	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1.Height of the stack from ground level	: 51.2 m	
2.Diameter of the Stack at sampling point	: 1.6 m	
3.Area of Stack	: 2.01 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1.Temperature of emission (°C)	: 68	EPA Part 2
2.Barometric pressure (mm of Hg)	: 731	EPA Part 2
3.Velocity of gas (m/sec)	: 13.57	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm ³)	: 18.4	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited



Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2188

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00231

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 11.00 A.M

Sampling Location : Coal Mill (Line - 3)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 62.2 m |
| 2. Diameter of the Stack at sampling point | : 2.24 m |
| 3. Area of Stack | : 3.94 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|---------|------------|
| 1. Temperature of emission (°C) | : 68 | EPA Part 2 |
| 2. Barometric pressure (mm of Hg) | : 735 | EPA Part 2 |
| 3. Velocity of gas (m/sec) | : 13.71 | EPA Part 2 |
| 4. Concentration of Particulate Matters (mg/Nm ³) | : 15.9 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2189

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00232

Sample Description : Stack Emission

Date & Time of Sampling: 08.02.2021 at 03.40 P.M

Sampling Location : Clinker Cooler (Line – 1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 40.0 m |
| 2. Diameter of the Stack at sampling point | : 3.00 m |
| 3. Area of Stack | : 7.065 m ² |

C. Results of sampling & analysis of gaseous emission

	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 110	EPA Part 2
2. Barometric pressure (mm of Hg)	: 737	EPA Part 2
3. Velocity of gas (m/sec)	: 11.66	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 16.7	EPA Part-5

D. Pollution control device

Details of pollution control devices attached with the stack : Electrostatic Precipitator

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2190

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00233

Sample Description : Stack Emission

Date & Time of Sampling: 09.02.2021 at 02.20 P.M

Sampling Location : Clinker Cooler (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 48.9 m |
| 2. Diameter of the Stack at sampling point | : 3.35 m |
| 3. Area of Stack | : 8.81 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 105	EPA Part 2
2. Barometric pressure (mm of Hg)	: 729	EPA Part 2
3. Velocity of gas (m/sec)	: 14.15	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 21.7	EPA Part-5

D. Pollution control device

Details of pollution control devices attached with the stack : Electrostatic Precipitator

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



Mitra S.K. Private Limited

Shrachi Center (5th Floor)
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TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2191

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00234

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 12.00 P.M

Sampling Location : Clinker Cooler (Line - 3)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|-----------------------|
| 1. Height of the stack from ground level | : 45.3 m |
| 2. Diameter of the Stack at sampling point | : 3.5 m |
| 3. Area of Stack | : 9.61 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 114	EPA Part 2
2. Barometric pressure (mm of Hg)	: 733	EPA Part 2
3. Velocity of gas (m/sec)	: 12.04	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 22.3	EPA Part-5

D. Pollution control device

Details of pollution control devices attached with the stack : Electrostatic Precipitator

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory

Mitra S.K. Private Limited

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



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2192

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00235

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 05.00 P.M.

Sampling Location : Cement Mill 2 (Line – 1)

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 35.0 m |
| 2. Diameter of the Stack at sampling point | : 1.1 m |
| 3. Area of Stack | : 0.950 m ² |

C. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 89	EPA Part 2
2. Barometric pressure (mm of Hg)	: 733	EPA Part 2
3. Velocity of gas (m/sec)	: 11.31	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 18.7	EPA Part-5

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2193

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00236

Sample Description : Stack Emission

Date & Time of Sampling: 09.02.2021 at 12.00 P.M.

Sampling Location : Cement Mill 3 (Line – 2)

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 & Gypsum	
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	: 56.0 m	
2. Diameter of the Stack at sampling point	: 2.9 m	
3. Area of Stack	: 6.60. m ²	
<u>C. Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 88	EPA Part 2
2. Barometric pressure (mm of Hg)	: 732	EPA Part 2
3. Velocity of gas (m/sec)	: 11.71	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 17.6	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

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2194

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00237

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 01.00 P.M

Sampling Location : Cement Mill 4 (Line - 3)

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Cement Mill	
2. Emission due to	: Grinding of Clinker & Gypsum	
3. Material of construction of Stack	: Mild Steel	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 60.0 m	
2. Diameter of the Stack at sampling point	: 2.8 m	
3. Area of Stack	: 6.15 m ²	
C. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 87	EPA Part 2
2. Barometric pressure (mm of Hg)	: 728	EPA Part 2
3. Velocity of gas (m/sec)	: 11.44	EPA Part 2
4. Concentration of Particulate Matters (mg/Nm ³)	: 16.6	EPA Part-5
D. Pollution control device		
Details of pollution control devices attached with the stack	: Bag filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2195

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00238

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 02.00 P.M

Sampling Location : Packer 1 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 1 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Concentration of Particulate Matters (mg/Nm ³) | : 18.9 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2196

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00239

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 04.00 P.M

Sampling Location : Packer 2 (Line – 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 2 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

	<u>Result</u>	<u>Method</u>
1. Concentration of Particulate Matters (mg/Nm ³)	: 17.6	EPA Part-5

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2197

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00240

Sample Description : Stack Emission

Date & Time of Sampling: 10.02.2021 at 03.00 P.M

Sampling Location : Packer 3 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 3 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

- | | <u>Result</u> | <u>Method</u> |
|---|---------------|---------------|
| 1. Concentration of Particulate Matters (mg/Nm ³) | : 19.0 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2198

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00241

Sample Description : Stack Emission

Date & Time of Sampling: 08.02.2021 at 02.30 P.M

Sampling Location : Packer 4 (Line - 2)

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

ANALYSIS RESULT

A. General information about stack

- | | |
|---|------------|
| 1. Stack connected to | : Packer 4 |
| 2. Emission due to | : NA |
| 3. Material of construction of Stack | : MS |
| 4. Shape of Stack | : Circular |
| 5. Whether Stack is provided with permanent platform & ladder | : Yes |

B. Physical characteristics of stack

- | | |
|--|-------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 1.0 m |
| 3. Area of Stack | : 0.7857 m ² |

C. Results of sampling & analysis of gaseous emission

- | | Result | Method |
|---|--------|------------|
| 1. Concentration of Particulate Matters (mg/Nm ³) | : 22.0 | EPA Part-5 |

D. Pollution control device

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

E. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2199

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00242

Sample Description : Flue Gas Monitoring

Sampling Location : Coal Crusher Plant - 1 (Mangrol)

Date & Time of Sampling : 08.02.2021 at 01.25 PM

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 0.40 m |
| 3. Height of the sampling point from GL | : 7.0 m |
| 4. Area of Stack | : 0.127 m ² |

C. Analysis/Characteristic of stack

1. Fuel used : Coal

D. Results of sampling & analysis of gaseous emission

	Result	Method
1. Temperature of emission (°C)	: 26	EPA Part 2
2. Barometric pressure (mm of Hg)	: 736	EPA Part 2
3. Velocity of gas (m/sec)	: 12.50	EPA Part 2
5. Conc. of Particulate Matters (mg/Nm ³) at 6% O ₂ on dry basis	: 26.0	EPA Part-17

E. Pollution control device

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

F. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2200

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00243

Sample Description : Stack Emission

Date & Time of Sampling: 09.02.2021 at 01.00 P.M

Sampling Location : Limestone Crusher (Line - 2)

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

ANALYSIS RESULT

A. <u>General information about stack</u>		
1. Stack connected to	: Limestone Crusher	
2.Emission due to	: Limestone crushing	
3.Material of construction of Stack	: Mild Steel	
4.Shape of Stack	: Circular	
5.Whether Stack is provided with permanent platform & ladder	: Yes	
B. <u>Physical characteristics of stack</u>		
1.Height of the stack from ground level	: 30 m	
2.Diameter of the Stack at sampling point	: 0.40 m	
3.Area of Stack	: 1.23 m ²	
C. <u>Results of sampling & analysis of gaseous emission</u>	<u>Result</u>	<u>Method</u>
1.Temperature of emission (°C)	: 27	EPA Part 2
2.Barometric pressure (mm of Hg)	: 734	EPA Part 2
3.Velocity of gas (m/sec)	: 12.95	EPA Part 2
4.Concentration of Particulate Matters (mg/Nm ³)	: 19.7	EPA Part-5
D. <u>Pollution control device</u>		
Details of pollution control devices attached with the stack	: Bag Filter	
E. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2201

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00244

Sample Description : Flue Gas Monitoring

Sampling Location : 25 MW Thermal Power Plant (Mangrol)

Date & Time of Sampling : 11.02.2021 at 03.00 P.M.

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

ANALYSIS RESULT

A. General information about stack		
1. Stack connected to	: Boiler	
2. Emission due to	: Power Generation	
3. Material of construction of Stack	: RCC	
4. Shape of Stack	: Circular	
5. Whether Stack is provided with permanent platform & ladder	: Yes	
6. Generation Capacity	: 25 MW	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 110.0 m	
2. Diameter of the Stack at sampling point	: 3.69 m	
3. Height of the sampling point from GL	: 38.10 m	
4. Area of Stack	: 10.68 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used : Coal		
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 125	EPA Part 2
2. Barometric pressure (mm of Hg)	: 737	EPA Part 2
3. Velocity of gas (m/sec)	: 14.97	EPA Part 2
4. Concentration of Oxygen (% v/v)	: 12.1	IS 13270:1992, Reaf:2014
5. Conc. of Particulate Matters (mg/Nm ³) at 6% O ₂ on dry basis	: 22.0	EPA Part-17
E. Pollution control device		
Details of pollution control devices attached with the stack		: Electrostatic precipitator
F. Remarks : NIL		

Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2202

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00245

Sample Description : Flue Gas Monitoring

Sampling Location : Coal Crusher Plant (Mangrol)

Date & Time of Sampling : 11.02.2021 at 02.00 P.M.

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

ANALYSIS RESULT

A. General information about stack

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

B. Physical characteristics of stack

- | | |
|--|------------------------|
| 1. Height of the stack from ground level | : 30.0 m |
| 2. Diameter of the Stack at sampling point | : 0.40 m |
| 3. Height of the sampling point from GL | : 7.0 m |
| 4. Area of Stack | : 0.127 m ² |

C. Analysis/Characteristic of stack

1. Fuel used : Coal

D. Results of sampling & analysis of gaseous emission

	<u>Result</u>	<u>Method</u>
1. Temperature of emission (°C)	: 59	EPA Part 2
2. Barometric pressure (mm of Hg)	: 735	EPA Part 2
3. Velocity of gas (m/sec)	: 9.35	EPA Part 2
5. Conc. of Particulate Matters (mg/Nm ³) at 6% O ₂ on dry basis	: 19.3	EPA Part-17

E. Pollution control device

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

F. Remarks : NIL

Report Prepared by :

For Mitra S.K. Private Limited



J.K. Cement WORKS, MANGROL (RAJ) ANNEXURE-II
AMBIENT AIR QUALITY AVERAGE RESULTS (SPM) COMMON
FOR UNIT-1 ,2 ,3,CPP,WHRS & TOWNSHIP
(ALL VALUES IN MICROGRAMS / CUBIC METER)
(October' 2020 - March' 2021)

S.No. & Month	LOCATION / PERAMETER	NEAR TIME OFFICE	NEAR THERMAL POWER PLANT	NEAR FACTORY GATE	NEAR COLONY GATE	Remarks
Oct'20						
1	SPM	396	399	439	385	
2	PM10	54.30	59.58	72.10	60.80	
3	PM2.5	42.50	42.92	50.20	49.80	
4	SO2	24.30	22.05	25.50	24.20	
5	NOX	20.90	25.14	23.60	26.50	
6	CO	665	726	785	630	
Nov'20						
1	SPM	280	300	245	275	
2	PM10	33.01	44.86	35.94	40.00	
3	PM2.5	24.69	31.77	27.88	28.69	
4	SO2	9.98	10.99	13.03	11.02	
5	NOX	21.86	21.03	22.99	18.93	
6	CO	627	628	648	775	
Dec'20						
1	SPM	398	400	365	358	
2	PM10	55.76	56.96	62.39	55.21	
3	PM2.5	39.81	39.75	42.54	38.57	
4	SO2	23.23	25.16	23.21	25.26	
5	NOX	21.44	25.01	21.74	24.45	
6	CO	661	733	651	698	

Jan'21						
1	SPM	333	356	339	324	
2	PM10	50.57	54.76	50.61	45.78	
3	PM2.5	28.09	31.97	21.76	29.26	
4	SO2	14.92	16.00	15.72	16.96	
5	NOX	23.67	22.64	21.11	23.78	
6	CO	692	748	746	788	
Feb'21						
1	SPM	337	355	368	323	
2	PM10	51.45	53.74	51.56	46.67	
3	PM2.5	33.65	29.38	25.89	29.73	
4	SO2	15.29	16.22	15.22	16.71	
5	NOX	23.87	23.02	20.40	23.79	
6	CO	707	773	746	796	
March'21						
1	SPM	386	393	405	347	
2	PM10	49.52	56.21	50.02	42.97	
3	PM2.5	26.44	25.47	20.21	22.45	
4	SO2	12.57	15.86	16.30	15.28	
5	NOX	22.42	22.73	22.92	19.90	
6	CO	695	693	628	649	
Six monthly Average						
1	SPM	355.0	367.0	360.3	335.2	
2	PM10	49.1	54.4	53.8	48.6	
3	PM2.5	32.5	33.5	31.4	33.1	
4	SO2	16.7	17.7	18.2	18.2	
5	NOX	22.4	23.3	22.1	22.9	
6	CO	674.7	716.9	700.6	722.6	

G. Singh

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 :

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

Report No. : MSK/UDR/2020-21/1529

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00507

Sample Description : Ambient Air

Sampling Location : Near Time Office

Date of Sampling : 23/24.11.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	82.0	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	51.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.2	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	34.8	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.65	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S. K. Pvt. Ltd.

(Authorized Signatory)

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1530

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00508

Sample Description : Ambient Air

Sampling Location : Near Thermal Power Plant

Date of Sampling : 23/24.11.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	79.0	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	47.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	9.1	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	29.4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.41	IS 5182 :(Part-10) :1999

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

Checked By

For Mitra S. K. Pvt. Ltd.

(Authorized Signatory)

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1531

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00509

Sample Description : Ambient Air

Sampling Location : Near Factory Gate

Date of Sampling : 23/24.11.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in $\mu\text{g}/\text{m}^3$	100	65.0	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	48.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	11.1	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	33.4	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.41	IS 5182 :(Part-10) :1999

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

Checked By

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

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/1532

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00510

Sample Description : Ambient Air

Sampling Location : Near Colony Gate

Date of Sampling : 23/24.11.2020

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	53.0	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in µg/m ³	60	29.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in µg/m ³	80	8.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	29.5	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	0.66	IS 5182 :(Part-10) :1999

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

Checked By

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

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2133

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00127

Sample Description : Ambient Air

Sampling Location : Near Time Office, Mangrol

Date of Sampling : 08/09.02.2021

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

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	67.5	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	41.7	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.0	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	35.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.79	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in $\mu\text{g}/\text{m}^3$	180	<20.0	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in $\mu\text{g}/\text{m}^3$	400	12.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in $\mu\text{g}/\text{m}^3$	1	0.02	EPA-IO 3.4
9	Nickel (Ni) in ng/m^3	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m^3	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in $\mu\text{g}/\text{m}^3$	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.5	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

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



Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2134

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00128

Sample Description : Ambient Air

Sampling Location : Thermal Power Plant, Mangrol

Date of Sampling : 08/09.02.2021

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

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	66.1	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	38.0	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	7.9	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	22.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	1.22	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in $\mu\text{g}/\text{m}^3$	180	<20.0	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in $\mu\text{g}/\text{m}^3$	400	11.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in $\mu\text{g}/\text{m}^3$	1	<0.01	EPA-IO 3.4
9	Nickel (Ni) in ng/m^3	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m^3	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in $\mu\text{g}/\text{m}^3$	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.5	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

For Mitra S. K. Pvt. Ltd.

Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2135

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00129

Sample Description : Ambient Air

Sampling Location : Near Factory Gate, Mangrol

Date of Sampling : 08/09.02.2021

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

AMBIENT AIR QUALITY MONITORING REPORT

SL. NO.	Pollutants	Limit	Result	Method of Test Reference
1	Particulate matter (PM ₁₀) in µg/m ³	100	73.0	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in µg/m ³	60	43.1	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in µg/m ³	80	6.8	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in µg/m ³	80	23.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m ³	2	1.08	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in µg/m ³	180	<20.0	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in µg/m ³	400	13.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in µg/m ³	1	0.02	EPA-IO 3.4
9	Nickel (Ni) in ng/m ³	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m ³	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in µg/m ³	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m ³	1	<0.5	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

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

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

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

Report No. : MSK/UDR/2020-21/2136

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00130

Sample Description : Ambient Air

Sampling Location : Near Colony Gate, Mangrol

Date of Sampling : 08/09.02.2021

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

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	65.0	IS: 5182:(Part-23)-2006
2	Particulate matter(PM _{2.5}) in $\mu\text{g}/\text{m}^3$	60	40.2	TPM/MSK/ENV(AP)/01/03
3	Sulphur dioxide(SO ₂) in $\mu\text{g}/\text{m}^3$	80	6.4	IS: 5182 (Part-2)-2001
4	Nitrogen dioxide (NO ₂) in $\mu\text{g}/\text{m}^3$	80	20.0	IS: 5182 (Part- 6)-2006
5	Carbon monoxide(CO) in mg/m^3	2	0.52	IS 5182 :(Part-10) :1999
6	Ozone (O ₃) in $\mu\text{g}/\text{m}^3$	180	<20.0	TPM/MSK/ENV(AP)/01/07
7	Ammonia (NH ₃) in $\mu\text{g}/\text{m}^3$	400	12.0	TPM/MSK/ENV(AP)/01/08
8	Lead (Pb) in $\mu\text{g}/\text{m}^3$	1	<0.01	EPA-IO 3.4
9	Nickel (Ni) in ng/m^3	20	<5.0	EPA-IO 3.4
10	Arsenic (As) in ng/m^3	6	<1.0	EPA-IO 3.4
11	Benzene (C ₆ H ₆) in $\mu\text{g}/\text{m}^3$	5	<4.2	IS 5182 : Part. 11 : 2006
12	Benzo(a) pyrene (BaP) in ng/m^3	1	<0.5	IS 5182 : Part. 12 : 2004

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

Report Prepared By:

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

कार्यालय उप वन संरक्षक, वन्यजीव, चित्तौड़गढ़

Phone No, 01472-244915,

E-mail ID - defwlchittorgarh@gmail.com

क्रमांक : एफ() सर्वे/उवसं/वजी/2020-21/

दिनांक:

निमित्त

उप वन संरक्षक

चित्तौड़गढ़

विषय :- Request for approval of combined wildlife conservation plan for Scheduled-I species Viz, Indian Peafowl (Pavo cristatus) & Panther (Panthera pardus fusca), Rusty-spotted cat (Prionailurus rubiginosus), Indian wolf (Canis lupus pallipes) Indian Monitor Lizard (Varanus bengalensis) and Indian vulture (Gyps indicus/gyps bengaliensis) proposed by J.K. Cement Works(J.K. Cement Nimbahera, J.K. Mangrol Cement Plant, Ahirpura Limestone Mine, Karunda Limestone Mine, Malikhera Limestone Mine, Mangrol Limestone Mine, Mangrol-Tilakhera Limestone Mine) Tehsil-Nimbahera, Dist-Chittorgarh (Rajasthan)

प्रसंग :- आपका पत्र क्रमांक 2050 दिनांक 01.04.2021 के क्रम में।

महोदय,

उपरोक्त विषयान्तर्गत प्रासंगिक पत्र के क्रम में निवेदन है कि प्रधान मुख्य वन संरक्षक एवं मुख्य वन्यजीव प्रतिपालक राजस्थान जयपुर के पत्रांक एफ 11(419)विकास-II/मुवजीप्र/2020-21/5-6 दिनांक 4.1.2021 में उल्लेखित बिन्दु संख्या 4 अनुसार मैसर्स जे.के. सीमेन्ट वर्क्स के निम्नांकित खनन पट्टा एवं सीमेन्ट प्लांट इस कार्यालय अधिनस्थ आने वाले बस्सी एवं सीतामाता वन्यजीव अभयारण्य के 10 किमी. परिधि में स्थित नहीं है-

S. No.	M.L. No./ Plant name	Name of Lease/Plant
1	J.K. Cement Works-Nimbahera	J.K. Cement Works-Nimbahera
2	J K Cement Works- Mangrol	J K Cement Works- Mangrol
3	ML No. 02/1997	Ahirpura Limestone Mine
4	ML No. 03/2003	Karunda Limestone Mine
5	ML. No. 04/2003	Malikhera Limestone Mine
6	ML No. 07/1997	Mangrol-Tilakhera Limestone Mine
7	ML No. 26/2008	Mangrol Limestone Mine

भवदीय

(डॉ. टी. मोहनराज)

उप वन संरक्षक

वन्यजीव, चित्तौड़गढ़

क्रमांक : एफ() सर्वे/उवसं/वजी/2020-21/ 2910

दिनांक : 22.04.2021

प्रतिलिपि : मैसर्स जे.के. सीमेन्ट वर्क्स, कैलाश नगर, निम्बाहेड़ा, जिला-चित्तौड़गढ़ को सूचनार्थ प्रेषित है।

(डॉ. टी. मोहनराज)

उप वन संरक्षक

वन्यजीव, चित्तौड़गढ़

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works Mangrol

Vill-Mangrol, Teh- Nimbahera,

Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2020-21/1391

Date : 04.12.2020

Sample No. : MSKGL/ED/2020-21/11/00630

Sample Description : Effluent Water

Sample Mark : Sushila Nagar (STP)

Sample Submitted on : 20.10.2020

Reference No.& Date : 4600064544 , dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25 ⁰ C)	---	5.5 to 9.0	7.75
2.	Chloride as Cl	mg/l	1000	117
3.	Total Suspended solids	mg/l	100	25
4.	Biological Oxidation Demand (3 days at 27 ⁰ C)	mg/l	30	<2.5
5.	Chemical Oxygen Demand	mg/l	250	7.9
6.	Oil & Grease	mg/l	10	<1.4
7.	Ammonical Nitrogen (as N)	mg/l	50	<0.1
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1
10.	Total Kjeldahl Nitrogen	mg/l	--	0.42
11.	Faecal Coliform	MPN/100 ml	--	<1.8

Report Prepared by :

For Mitra S.K. Private Limited



Authorised Signatory

Mitra S.K. Private Limited

Shrachi Center (5th Floor)
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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works Mangrol

Vill-Mangrol, Teh- Nimbahera,

Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2020-21/1392

Date : 04.12.2020

Sample No. : MSKGL/ED/2020-21/11/00631

Sample Description : Effluent Water

Sample Mark : Sushila Nagar (STP)

Sample Submitted on : 11.11.2020

Reference No.& Date : 4600064544 , dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25 ⁰ C)	---	5.5 to 9.0	7.91
2.	Chloride as Cl	mg/l	1000	123
3.	Total Suspended solids	mg/l	100	18
4.	Biological Oxidation Demand (3 days at 27 ⁰ C)	mg/l	30	<2.0
5.	Chemical Oxygen Demand	mg/l	250	23
6.	Oil & Grease	mg/l	10	<1.4
7.	Ammonical Nitrogen (as N)	mg/l	50	<0.1
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1
10.	Total Kjeldahl Nitrogen	mg/l	--	0.39
11.	Faecal Coliform	MPN/100 ml	--	<1.8


Report Prepared by :

For Mitra S.K. Private Limited

Authorised Signatory

Mitra S.K. Private Limited

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



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TEST REPORT

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

Report No. : MSK/UDR/2020-21/1951
Date : 09.02.2021
Sample No. : MSKGL/ED/2020-21/01/00696
Sample Description : Effluent Water
Sample Mark : Sushila Nagar (STP)
Sample Submitted on : 26.12.2020

Reference No.& Date : 4600064544 , dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25 th C)	---	5.5 to 9.0	7.69
2.	Chloride as Cl	mg/l	1000	139
3.	Total Suspended solids	mg/l	100	5.3
4.	Biological Oxidation Demand (3 days at 27 th C)	mg/l	30	<2.0
5.	Chemical Oxygen Demand	mg/l	250	8.0
6.	Oil & Grease	mg/l	10	<1.4
7.	Ammonical Nitrogen (as N)	mg/l	50	<0.1
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1
10.	Total Kjeldahl Nitrogen	mg/l	--	<0.3
11.	Faecal Coliform	MPN/100 ml	--	<1.8

Report Prepared by :

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works Mangrol

Vill-Mangrol, Teh- Nimbahera,

Dist.- Chittorgarh (Rajasthan)

Report No. : MSK/UDR/2020-21/1955

Date : 09.02.2021

Sample No. : MSKGL/ED/2020-21/01/00697

Sample Description : Effluent Water

Sample Mark : Sushila Nagar (STP)

Sample Submitted on : 05.01.2021

Reference No.& Date : 4600064544 , dtd- 01.06.2020

ANALYSIS RESULT

Sl. No.	Parameter	Unit	Standard	Result
1.	pH (at 25° C)	---	5.5 to 9.0	7.46
2.	Chloride as Cl	mg/l	1000	98
3.	Total Suspended solids	mg/l	100	9.4
4.	Biological Oxidation Demand (3 days at 27° C)	mg/l	30	7.1
5.	Chemical Oxygen Demand	mg/l	250	24
6.	Oil & Grease	mg/l	10	<1.4
7.	Ammonical Nitrogen (as N)	mg/l	50	7.2
8.	Sulphide (as S)	mg/l	2.0	<0.1
9.	Total Residual Chlorine	mg/l	1.0	<0.1
10.	Total Kjeldahl Nitrogen	mg/l	--	10.0
11.	Faecal Coliform	MPN/100 ml	--	<1.8

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. Chittorgadh (Raj.)

Report No. : MSK/UDR/2020-21/2203
Date : 19.03.2021
Sample No. : MSKGL/ED/2020-21/03/00246
Sample Description : Domestic Waste Water
Sample Location : STP outlet Water (Nimbahera)
Date of Collection : 03.02.2021

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Result
1.	pH (at 25° C)	---	7.85
2.	Total Suspended solids (TSS)	mg/l	14.0
3.	Chemical Oxygen Demand (COD)	mg/l	28.0
4.	Bio-Chemical Oxygen Demand (3 days at 27° C)	mg/l	6.4
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	165
9.	Total Kjeldahl Nitrogen (as N)	mg/l	<0.3
10.	Total Residual Chlorine	mg/l	<0.1
11.	Faecal Coliform	MPN/100 ml	<1.8

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

Report No. : MSK/UDR/2020-21/1411
Date : 04.12.2020
Sample No. : MSKGL/ED/2020-21/11/00636
Sample Description : Treated Effluent Water
Sample Location : 25 MW CPP ETP (Mangrol)
Date of Collection : 11.11.2020

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25 ⁰ C)	---	6.5 to 8.5	8.35
2.	Total Suspended solids (TSS)	mg/l	100	9.1
3.	Oil & Grease	mg/l	10	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.56
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	⁰ C	Shall not exceed 5 ⁰ C above the receiving water temperature	4 ⁰ C higher than the intake water temperature
11.	Phosphate (as PO ₄)	mg/l	5.0	0.27
12.	Chemical Oxygen Demand as COD	mg/l	250.0	12
13.	Biological Oxygen Demand as BOD	mg/l	30.0	2.6

V. Souda
Report Prepared by :

For Mitra S.K. Private Limited
RAJASTHAN
Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :
Thermax Ltd.

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

Report No. : MSK/UDR/2020-21/2206

Date : 19.03.2021

Sample No. : MSKGL/ED/2020-21/03/00249

Sample Description : Treated Effluent Water

Sample Location : 25 MW CPP ETP (Mangrol)

Date of Collection : 11.02.2021

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25 ⁰ C)	---	6.5 to 8.5	7.70
2.	Total Suspended solids (TSS)	mg/l	100	4.0
3.	Oil & Grease	mg/l	10	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.3
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	⁰ C	Shall not exceed 5 ⁰ C above the receiving water temperature	4 ⁰ C higher than the intake water temperature
11.	Phosphate (as PO ₄)	mg/l	5.0	0.61
12.	Chemical Oxygen Demand as COD	mg/l	250.0	8.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	<2.0

Report Prepared by :

For Mitra S.K. Private Limited



Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :
Thermax Ltd.

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

Report No. : MSK/UDR/2020-21/1410

Date : 04.12.2020

Sample No. : MSKGL/ED/2020-21/11/00635

Sample Description : Treated Effluent Water

Sample Location : 29.1 MW WHR ETP (Mangrol)

Date of Collection : 11.11.2020

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25 ⁰ C)	---	6.5 to 8.5	7.60
2.	Total Suspended solids (TSS)	mg/l	100	6.2
3.	Oil & Grease	mg/l	10	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.96
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	⁰ C	Shall not exceed 5 ⁰ C above the receiving water temperature	25
11.	Phosphate (as PO ₄)	mg/l	5.0	<0.15
12.	Chemical Oxygen Demand as COD	mg/l	250.0	<4.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	<2.0

V. Souran

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, Mangrol
Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2207
Date : 19.03.2021
Sample No. : MSKGL/ED/2020-21/03/00250
Sample Description : Treated Effluent Water
Sample Location : 10 MW WHR / 29.1 MW WHR
Waste Water (Mangrol)
Date of Collection : 11.02.2021

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

ANALYSIS RESULT

Sl No.	Parameter	Unit	Standard	Result
1.	pH (at 25 ⁰ C)	---	6.5 to 8.5	7.73
2.	Total Suspended solids (TSS)	mg/l	100	3.2
3.	Oil & Grease	mg/l	10	<1.4
4.	Total Residual Chlorine	mg/l	1.0	<0.1
5.	Iron (as Fe)	mg/l	1.0	0.2
6.	Chromium (Total)	mg/l	0.2	<0.01
7.	Free Available Chlorine	mg/l	0.5	<0.1
8.	Copper (as Cu)	mg/l	1.0	<0.02
9.	Zinc (as Zn)	mg/l	1.0	<0.02
10.	Temperature	⁰ C	Shall not exceed 5 ⁰ C above the receiving water temperature	25
11.	Phosphate (as PO ₄)	mg/l	5.0	<0.15
12.	Chemical Oxygen Demand as COD	mg/l	250.0	16.0
13.	Biological Oxygen Demand as BOD	mg/l	30.0	3.8

Report Prepared by :

For Mitra S.K. Private Limited



Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K. Cement Works, Mangrol

Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/1537

Date : 25.12.2020

Sample No. : MSKGL/ED/2020-21/12/00515 to 00518

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.	23.11.2020	Near Colony Gate (Mangrol Plant)	58.1	49.8
2.		Near Time Office (Mangrol Plant)	62.3	44.5
3.		Near Thermal Power Plant (Mangrol Plant)	70.5	51.3
4.		Near Factory Gate (Mangrol Plant)	68.6	51.4
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70

Report Prepared by :

For Mitra S.K. Private Limited



Authorised Signatory

Mitra S.K. Private Limited

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TEST REPORT

Name & Address of the Customer :

J.K.Cement Works, Mangrol

Distt. Chittorgarh (Raj.)

Report No. : MSK/UDR/2020-21/2166

Date : 19.03.2021

Sample No. :MSKGL/ED/2020-21/03/00200 to 00203

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.	08/09.02.2021	Near Time Office (Mangrol)	58.4	39.6
2.		Near Thermal Power Plant (Mangrol)	55.9	38.2
3.	08/09.02.2021	Near Factory Gate (Mangrol)	60.1	40.0
4.		Near Colony Gate (Mangrol)	59.3	39.8
Limit As per CPCB (Environment Protection Rules, 1986)		in Industrial Area Leq dB(A)	75	70

Report Prepared by :

For Mitra S.K. Private Limited
Authorised Signatory