



BK BIRLA GROUP OF COMPANIES

MANGALAM CEMENT LTD.



MANGALAM CEMENT LTD.

Regd. A/D

MCL/Env.- 6(IV)/2022-2023/4299

17.11.2022

Director (Industry)
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj
New Delhi 110003

Sub.:-“Six monthly compliance report for the period from April 2022 to Sept. 2022 of conditions of environmental clearance issued to M/s Mangalam Cement Ltd. for the expansion of Cement Plant (Clinker 4.06 MTPA to 5.30 MTPA, Cement – 6.10 MTPA to 9.0 MTPA, Power 35 to 52.5 MW) situated at Village: Morak, Dist: Kota (Rajasthan).

Ref.: Environment Clearance Letter No. - F NO. J - 11011 /30 /2007 - IA II (I) (Pt.), dtd 20.12.2016.

Dear Sir,

We are submitting herewith six monthly compliance report for the period from April 2022 to Sept. 2022 of conditions of environmental clearance issued to M/s Mangalam Cement Ltd. for the expansion of Cement Plant (Clinker 4.06 MTPA to 5.30 MTPA, Cement – 6.10 MTPA to 9.0 MTPA, Power 35 to 52.5 MW) situated at Village: Morak, Dist: Kota (Rajasthan). Submitted for your kind information & records please.

Thanking you,
Yours faithfully,
For Mangalam Cement Ltd.

P. R. Chaudhary
Sr. Joint President (Operation) & FM

Cc to: Regional Director,
Integrated Regional Office,
Ministry of Env., Forest and Climate Change,
Integrated Regional Office, Jaipur , A-209 & 218,
Aranya Bhawan, Mahatma Gandhi Road, Jhalana Institutional Area,
Jaipur - 304002, Rajasthan
: Member Secretary,
Rajasthan Pollution Control Board,
4, Institutional Area,
Jhalana Doongri, Jaipur (Raj.)
: Regional Director,
Central Pollution Central Board,
Zonal Office (Central),
3rd Floor, Sahakar Bhawan,
North T. T. Nagar, Bhopal-462003

Regd. Office & Works : P.O. Aditya Nagar-326520, Morak, Distt. Kota (Raj.) CIN : L26943RJ1976PLC001705, Telefax : 07459-232156
Website : www.mangalamcement.com, E-mail : email@mangalamcement.com
Kota Office : Shop No. 20, 80 Feet Road, Opp. Sukhdham Colony, (Near SBI Bank) Kota - 324001 (Rajasthan)
Mob : 9351468064 / 9351468055 / 9351468445, E-mail : mclcta@kappa.net.in
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Jaipur Office : 2nd Floor, Geejgarh Tower, Hawa-Sarak, Jaipur - 302 006 (Rajasthan)
Tel. : 0141 - 2218933, 2218931, E-mail : jaipur.marketing@mangalamcement.com

Mangalam Cement Ltd.

Name of the Project :- Expansion of Cement Plant Clinker 4.06 MTPA to 5.30 MTPA, Cement – 6.10 MTPA to 9.0 MTPA, Power 35 to 52.5 MW by Mangalam Cement Limited	Project Code :-
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Clearance Letter No. : - F NO. J - 11011 /30 /2007 - IA II (I) (Pt.), dtd 20.12.2016

Month of Compliance Report :- April 2022 to September 2022

S.No	Conditions	Compliance Status																																																												
A.	<u>SPECIFIC CONDITIONS:</u>																																																													
i.	The Project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to ministry and its regional office.	Company has installed Continuous Emission Monitoring system at all the major stacks for real time (24 X 7) emission monitoring, as per CPCB guidelines and data are being transmitted to CPCB & RSPCB server continuously. Day average of real time Continuous Emission Monitoring Reports are enclosed in Annexure-I.																																																												
ii	The Standards issued by the ministry vide G.S.R. No. 612(E) dated 25 th August, 2014 and subsequent amendment date 9 th May, 2016 and 10 th May 2016 regarding cement plants with respect to particulate matter, SO ₂ and NO _x shall be followed.	We are complying the standards issued by the ministry vide G.S.R. No. 612(E) dated 25 th August, 2014 and subsequent amendment date 9 th May, 2016 and 10 th May 2016 regarding cement plants with respect to particulate matter, SO ₂ and NO _x . Monitoring results of Cement Plants are given as below and details are attached in Annexure- I (A). <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="4" style="text-align: left; padding: 5px;">Unit-I</th> </tr> <tr> <th rowspan="2" style="width: 10%; padding: 5px;">Stack No.</th> <th rowspan="2" style="width: 40%; padding: 5px;">Details of Stack</th> <th colspan="2" style="width: 50%; padding: 5px;">Emission (mg/Nm³)</th> </tr> <tr> <th style="width: 20%; padding: 5px;">Norms</th> <th style="width: 30%; padding: 5px;">Avg. Emission</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="text-align: center; padding: 5px;">1</td> <td rowspan="3" style="padding: 5px;">Kiln Main Stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">22.17</td> </tr> <tr> <td style="text-align: center; padding: 5px;">100</td> <td style="text-align: center; padding: 5px;">24.54</td> </tr> <tr> <td style="text-align: center; padding: 5px;">800</td> <td style="text-align: center; padding: 5px;">637.53</td> </tr> <tr> <td style="text-align: center; padding: 5px;">2</td> <td style="padding: 5px;">Clinker Cooler Stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">21.71</td> </tr> <tr> <td style="text-align: center; padding: 5px;">3</td> <td style="padding: 5px;">Cement Mill Stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">16.70</td> </tr> <tr> <td style="text-align: center; padding: 5px;">4</td> <td style="padding: 5px;">Vertical Coal Mill Stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">14.55</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="4" style="text-align: left; padding: 5px;">Unit-II</th> </tr> <tr> <th rowspan="2" style="width: 10%; padding: 5px;">Stack No.</th> <th rowspan="2" style="width: 40%; padding: 5px;">Details of Stack</th> <th colspan="2" style="width: 50%; padding: 5px;">Emission (mg/Nm³)</th> </tr> <tr> <th style="width: 20%; padding: 5px;">Norms</th> <th style="width: 30%; padding: 5px;">Avg. Emission</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="text-align: center; padding: 5px;">1</td> <td rowspan="3" style="padding: 5px;">Kiln Main Stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">21.39</td> </tr> <tr> <td style="text-align: center; padding: 5px;">100</td> <td style="text-align: center; padding: 5px;">29.91</td> </tr> <tr> <td style="text-align: center; padding: 5px;">800</td> <td style="text-align: center; padding: 5px;">431.17</td> </tr> <tr> <td style="text-align: center; padding: 5px;">2</td> <td style="padding: 5px;">Clinker Cooler Stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">19.72</td> </tr> <tr> <td style="text-align: center; padding: 5px;">3</td> <td style="padding: 5px;">Cement Mill Stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">19.30</td> </tr> <tr> <td style="text-align: center; padding: 5px;">4</td> <td style="padding: 5px;">Coal Mill stack</td> <td style="text-align: center; padding: 5px;">30</td> <td style="text-align: center; padding: 5px;">18.17</td> </tr> </tbody> </table>	Unit-I				Stack No.	Details of Stack	Emission (mg/Nm ³)		Norms	Avg. Emission	1	Kiln Main Stack	30	22.17	100	24.54	800	637.53	2	Clinker Cooler Stack	30	21.71	3	Cement Mill Stack	30	16.70	4	Vertical Coal Mill Stack	30	14.55	Unit-II				Stack No.	Details of Stack	Emission (mg/Nm ³)		Norms	Avg. Emission	1	Kiln Main Stack	30	21.39	100	29.91	800	431.17	2	Clinker Cooler Stack	30	19.72	3	Cement Mill Stack	30	19.30	4	Coal Mill stack	30	18.17
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iii	<p>Prior clearance from the Standing Committee of the National Board for Wildlife shall be obtained due to location of the plant in the buffer zone of Darrah Wildlife Sanctuary, before commencing any expansion activity relating to the project at site. All the conditions stipulated by the Standing Committee shall be effectively implemented in the project. It shall be noted that this clearance does not necessarily implies that wildlife clearance shall be granted to the project and that your proposal for wildlife clearance shall be considered by the competent authorities on its merit and decision taken. The investment made in the project, if any based on environmental clearance granted to the project, in anticipation of the clearance from wildlife clearance shall be entirely at the cost and risk of the project proponent and ministry of Environment, Forest and Climate Change shall not be responsible in this regard, in any manner.</p>	<p>We have received clearance from National Board for Wildlife (NBWL) vide letter no. F()WLC/CWLW/2019/8463 dated 23.10.2020 and complying all the conditions stipulated by Standing Committee. Copy of NBWL Clearance letter has already been submitted to the Ministry vide our letter No. MCL/Env-6(IV)/2021-2022/310 dated 25.05.2021.</p>			
iv	<p>The project proponent shall not draw ground water for the project.</p>	<p>Point noted and ensures that we are not drawing ground water for the project.</p>			

v	<p>The standards issued by the Ministry vide S.O. 3305 (E) dated 07.12.2015 regarding thermal power plants shall be followed.</p>	<p>The standards issued by the Ministry vide S.O. 3305 (E) dated 07.12.2015 and its subsequent amendments regarding thermal power plants are being complied. Monitoring results of Captive Power Plants are given as below and details are attached in Annexure- I (A).</p> <table border="1" data-bbox="1002 479 1938 1187"> <thead> <tr> <th colspan="4">CPP-I</th> </tr> <tr> <th rowspan="2">Stack No.</th> <th rowspan="2">Details of Stack</th> <th colspan="2">Emission (mg/Nm³)</th> </tr> <tr> <th>Norms</th> <th>Avg. Emission</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1</td> <td rowspan="3">Main Stack Power plant - I</td> <td>50</td> <td>31.41</td> </tr> <tr> <td>600</td> <td>501.21</td> </tr> <tr> <td>450</td> <td>243.69</td> </tr> <tr> <th colspan="4">CPP-II</th> </tr> <tr> <th rowspan="2">Stack No.</th> <th rowspan="2">Details of Stack</th> <th colspan="2">Emission (mg/Nm³)</th> </tr> <tr> <th>Norms</th> <th>Avg. Emission</th> </tr> <tr> <td rowspan="3">1</td> <td rowspan="3">Main Stack Power plant - II</td> <td>50</td> <td>38.10</td> </tr> <tr> <td>600</td> <td>521.50</td> </tr> <tr> <td>450</td> <td>351.50</td> </tr> </tbody> </table>	CPP-I				Stack No.	Details of Stack	Emission (mg/Nm ³)		Norms	Avg. Emission	1	Main Stack Power plant - I	50	31.41	600	501.21	450	243.69	CPP-II				Stack No.	Details of Stack	Emission (mg/Nm ³)		Norms	Avg. Emission	1	Main Stack Power plant - II	50	38.10	600	521.50	450	351.50
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vi	<p>Two High Volume Samplers should be installed at the boundary of the wild life sanctuary suitably to continuously monitor the parameters and maintain records. These records shall be submitted along with the 6 monthly compliance report to the Ministry's Regional Office.</p>	<p>We are continuously monitored parameters on two locations at the boundary of the wildlife sanctuary through High Volume Samplers on quarterly basis and same are being sent to Ministry's Regional Office with six monthly compliance report. Monitoring Reports are enclosed in Annexure-II.</p>																																				
vii	<p>Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.</p>	<p>We have provided efficient Air Pollution Control Devices at all the stacks to keep the emission under the prescribed norms and to monitor real time emission level we have installed Continuous Emission Monitoring facilities at all the major stacks and real time data from these CEMS analyzers are being transmitted to CPCB & RSPCB server. Status reports of APCM & CEMS Installation along with Measured Emission Values of major stacks are given in Annexure-I (A).</p>																																				

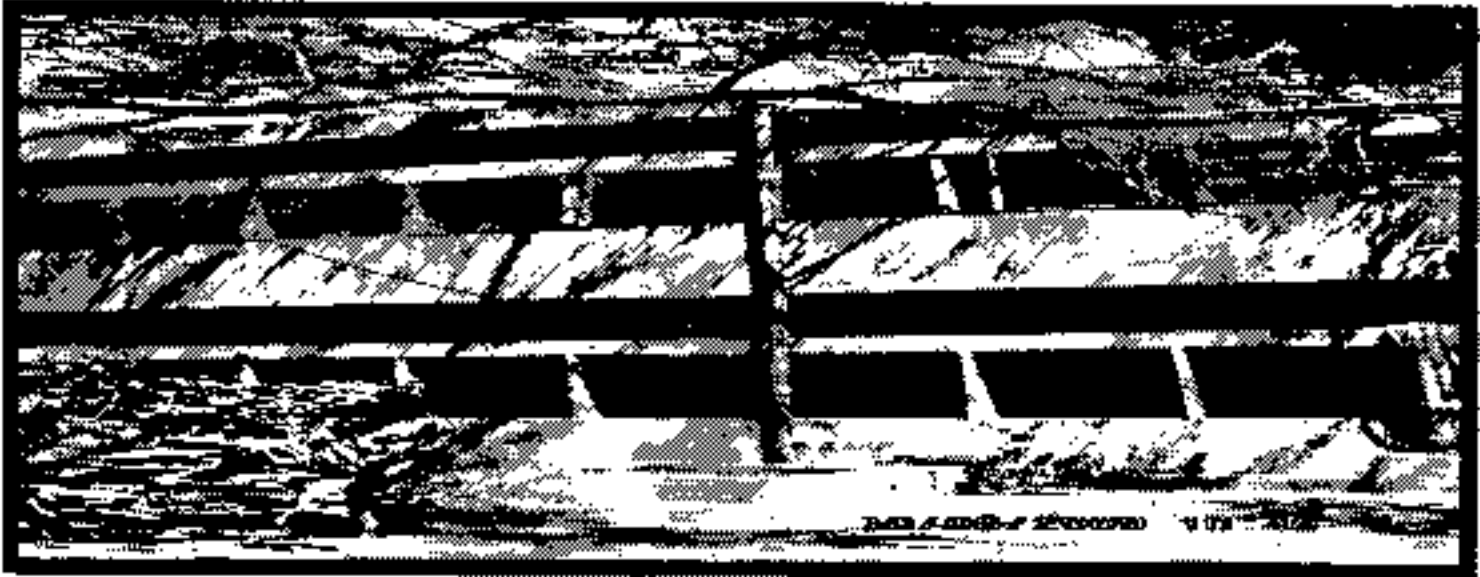
viii	<p>The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16th November, 2009 shall be followed.</p>	<p>We are following National Ambient Air Quality Standard issued by Ministry of Environmental and Forest vide GSR 826(E) of 16th November-2009. Copy is enclosed in Annexure - I(B).</p> <table border="1" data-bbox="1012 523 1983 1067"> <thead> <tr> <th colspan="7">Mangalam Cement Ltd.</th> </tr> <tr> <th colspan="7">Ambient Air Quality Monitoring Results</th> </tr> <tr> <th rowspan="2">S N</th> <th rowspan="2">Location→ Parameters ↓</th> <th rowspan="2">Norms (µg/m³)</th> <th rowspan="2">Near Railway Gate</th> <th rowspan="2">Near Security Gate</th> <th rowspan="2">Near Rack Loading Area</th> <th rowspan="2">Near Work Shop</th> </tr> <tr> <th colspan="5">Avg.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PM 0</td> <td>100</td> <td>61.03</td> <td>57.39</td> <td>55.85</td> <td>64.04</td> </tr> <tr> <td>2</td> <td>PM2.5</td> <td>60</td> <td>28.65</td> <td>27.39</td> <td>26.18</td> <td>31.32</td> </tr> <tr> <td>3</td> <td>SO₂</td> <td>80</td> <td>9.43</td> <td>8.90</td> <td>7.59</td> <td>8.63</td> </tr> <tr> <td>4</td> <td>NO_x</td> <td>80</td> <td>17.04</td> <td>14.97</td> <td>16.16</td> <td>15.87</td> </tr> <tr> <td>5</td> <td>CO</td> <td>4000</td> <td>0.325</td> <td>0.285</td> <td>0.38</td> <td>0.470</td> </tr> </tbody> </table>	Mangalam Cement Ltd.							Ambient Air Quality Monitoring Results							S N	Location→ Parameters ↓	Norms (µg/m ³)	Near Railway Gate	Near Security Gate	Near Rack Loading Area	Near Work Shop	Avg.					1	PM 0	100	61.03	57.39	55.85	64.04	2	PM2.5	60	28.65	27.39	26.18	31.32	3	SO ₂	80	9.43	8.90	7.59	8.63	4	NO _x	80	17.04	14.97	16.16	15.87	5	CO	4000	0.325	0.285	0.38	0.470
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5	CO	4000	0.325	0.285	0.38	0.470																																																									
ix	<p>A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.</p>	<p>A statement on carbon budgeting for the Financial Year 2021-2022 is enclosed in Annexure - III.</p>																																																													
x	<p>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 deg 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</p>	<p>Point noted and complying. We have provided proper protective equipments, garments etc to all personnel involved in hot work. And provide proper arrangement for sufficient drinking water at site to prevent dehydration etc.</p>																																																													

	proper protective equipments, garments and gear 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.	
xi	Vehicular pollution due to transportation of raw material shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material.	We have installed closed conveyor belts with efficient bag filters to minimize the internal vehicular movement of raw materials. Paved/ concrete roads have been provided for all vehicular movement. No vehicle is allowed inside the plant without PUC certificate. Proper arrangements have also been made to control dust emissions during loading and unloading of raw materials. Fugitive emission monitoring results of our plants are attached in Annexure- I (D) .
xii	'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.	We are maintaining the "Zero" effluent discharge strictly and no waste water is being discharged.
xiii	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under Environment (Protection) Act, 1986.	Domestic Sewage & industrial effluent from thermal power plants is being treated in our own STP & neutralization pit respectively to meet the prescribed norms. Regular monitoring of treated sewage & treated industrial effluent from thermal power plants is being conducted through MoEF&CC approved external laboratory.
xiv	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/ hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.	We have facility for proper handling, storage, utilization and disposal of hazardous & other wastes and details of hazardous & other wastes are being submitted to SPCB in Form-IV. Copies of the same are enclosed herewith as Annexure-IV .
xv	A time bound action plan shall be submitted to reduce solid waste generated due to the project related activities, its proper utilization and disposal.	No solid waste is generated from our cement plant however fly ash generated from our captive thermal power plants is being 100% utilized in cement manufacturing.
xvi	A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB	We have prepared and submitted detailed Risk and Disaster Management Plan to the Ministry's Regional Office- Lucknow, CPCB- New Delhi and RSPCB Jaipur vide our letter no. MCL/Env-95/2016-17/7006 dated

	within 3 months of issue of environment clearance letter.	15.03.2017.
xvii	Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per CPCB guidelines. 10 to 15 m wide green belt should be developed all along the boundary of the site and both the side of the road.	Green belt development is our ongoing process and we have planted 1,31,844 numbers of plant saplings in & around the plant premises and developed more than 33 % green belt area, as per the CPCB guidelines. Year wise details of plantation are given in Annexure-V .
xvii i	All the commitments made to the public during Public Hearing/ Public consultation meeting shall be satisfactorily implemented and adequate budget provision shall be made accordingly.	We are implementing all the commitments made to the public during Public Hearing/ Public consultation.
xix	At least 2.5% of the total cost of project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-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 Panchyat and District Administration. 'Action taken report in this regard shall be submitted to the Ministry's Regional Office.	We are implementing all the commitments made to the public during Public Hearing/ Public consultation.
xx	The proponent shall prepare a detailed CSR plan for every year for the next 5 years for the existing cum expansion project, which includes village wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and Infrastructure requirements such as strengthening of village roads, avenue plantation, etc.) activities in consultation with local	We are following the condition as per guidelines. CSR Report for the period from April 2022 to Sept 2022 is attached in Annexure-VI .

	<p>communities and administration. The CSR plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provided for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created & the annual capital & revenue expenditure on various activities of the plan shall be submitted as part of the Compliance Report to RO. The details of the CSR plan shall be uploaded on the company website & shall be provided in the Annual Report of the company.</p>	
xxi	<p>The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/ procedure to being into focus any infringement/deviation/violation of environmental or forest norms/ conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/ or stakeholders or shareholders.</p>	<p>We have submitted company's Policy for Environment Management System certified by BIS and under this system, we have proper company policy focusing on continual improvement in the field of Environment including prevention of pollution, conservation of natural resources etc. vide our letter no. MCL/ ENV-95/ 2016-17/ dated 11.03.2017.</p>
xxii	<p>Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of</p>	<p>Point noted. It is a brown field project and we have our own township, where all necessary facilities such as fuel for cooking, toilets, STP, safe drinking water, medical health care, crèche etc. are available.</p>

	temporary structures to be removed after the completion of the project.																																																																
xxii i	The project proponent shall provide for solar light system for all common areas, street lights, village, parking around project area and maintain the same regularly.	Point noted & complying in phase manner. We have installed solar light in mine's magazine area & solar geysers at guest house & bachelor's hostel.																																																															
xxi v	The project proponent shall provide for LED lights in their offices and residential areas.	We have replaced more than 6000 numbers of LED lights in our plant, residential areas, street light, parking areas etc.																																																															
B.	<u>GENERAL CONDITIONS:</u>																																																																
i	The project authorities must strictly adhere to the stipulations made by the Rajasthan Pollution Control Board and the State Govt.	We are strictly complying the stipulations made by the Rajasthan State Pollution Control Board and the State Government.																																																															
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	For expansion or modification of the plant we will take prior approval of the Ministry, 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 PM10, PM2.5, SO2 and NOx are anticipated 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.	<p>Four ambient air qualities – monitoring stations are provided at the periphery of our factory premises for the monitoring of ambient air quality. The locations of these stations were decided in consultation with RO Kota. We are submitting data on ambient air quality and stack emissions to Regional office at Lucknow and RPCB, CPCB once in six months.</p> <table border="1"> <thead> <tr> <th colspan="7">Mangalam Cement Ltd.</th> </tr> <tr> <th colspan="7">Ambient Air Quality Monitoring Results</th> </tr> <tr> <th>SN</th> <th>Location→ Parameters ↓</th> <th>Norms (µg/m3)</th> <th>Near Railway Gate</th> <th>Near Securi ty Gate</th> <th>Near Rack Loadi ng Area</th> <th>Near Work Shop</th> </tr> <tr> <th colspan="7">Avg.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PM10</td> <td>100</td> <td>61.03</td> <td>57.39</td> <td>55.85</td> <td>64.04</td> </tr> <tr> <td>2</td> <td>PM2.5</td> <td>60</td> <td>28.65</td> <td>27.39</td> <td>26.18</td> <td>31.32</td> </tr> <tr> <td>3</td> <td>SO₂</td> <td>80</td> <td>9.43</td> <td>8.90</td> <td>7.59</td> <td>8.63</td> </tr> <tr> <td>4</td> <td>NO_x</td> <td>80</td> <td>17.04</td> <td>14.97</td> <td>16.16</td> <td>15.87</td> </tr> <tr> <td>5</td> <td>CO</td> <td>4000</td> <td>0.325</td> <td>0.285</td> <td>0.38</td> <td>0.470</td> </tr> </tbody> </table>	Mangalam Cement Ltd.							Ambient Air Quality Monitoring Results							SN	Location→ Parameters ↓	Norms (µg/m3)	Near Railway Gate	Near Securi ty Gate	Near Rack Loadi ng Area	Near Work Shop	Avg.							1	PM10	100	61.03	57.39	55.85	64.04	2	PM2.5	60	28.65	27.39	26.18	31.32	3	SO ₂	80	9.43	8.90	7.59	8.63	4	NO _x	80	17.04	14.97	16.16	15.87	5	CO	4000	0.325	0.285	0.38	0.470
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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	Industrial waste water is being collected and treated as per GSR 422 (E) dtd. 19th May 1993 guidelines and used for plantation purpose after treatment.																																																															

	December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.																											
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. 75 dBA (daytime) and 70 dBA (nighttime).	<p>Noise is being checked on regularly basis as per standard & limited within the prescribed standards. Copy is enclosed herewith in Annexure - I(C).</p> <table border="1"> <thead> <tr> <th colspan="4">Results of Noise</th> </tr> <tr> <th rowspan="2">Sr. No.</th> <th rowspan="2">Location</th> <th colspan="2">Ambient Air Noise Results (dB)</th> </tr> <tr> <th>Day Avg.</th> <th>Night Avg.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Near Security Gate</td> <td>61.47</td> <td>53.87</td> </tr> <tr> <td>2</td> <td>Near Railway Gate</td> <td>63.79</td> <td>50.40</td> </tr> <tr> <td>3</td> <td>Near Rack Loading Area</td> <td>64.24</td> <td>46.68</td> </tr> <tr> <td>4</td> <td>Near Work Shop</td> <td>64.72</td> <td>55.53</td> </tr> </tbody> </table>	Results of Noise				Sr. No.	Location	Ambient Air Noise Results (dB)		Day Avg.	Night Avg.	1	Near Security Gate	61.47	53.87	2	Near Railway Gate	63.79	50.40	3	Near Rack Loading Area	64.24	46.68	4	Near Work Shop	64.72	55.53
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vi	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factory Act.	We are maintaining Occupational health checkup of the workers regular basis as per the factories act. Report is enclosed herewith in Annexure - VII.																										
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.	<p>We have developed rainwater harvesting system at our plant buildings.</p> <p style="text-align: center;">Rain water Harvesting</p>  <table border="1"> <thead> <tr> <th colspan="3">Mangalam Cement Ltd.</th> </tr> <tr> <th colspan="3">Details Of water Harvesting</th> </tr> <tr> <th>S.No.</th> <th>Location</th> <th>Roof Area (m²)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Engineering Building</td> <td>725</td> </tr> <tr> <td>2.</td> <td>Load Center Building</td> <td>1458</td> </tr> <tr> <td>3.</td> <td>Store Building</td> <td>1620</td> </tr> <tr> <td>4.</td> <td>Captive Power Plant-I</td> <td>1200</td> </tr> </tbody> </table>	Mangalam Cement Ltd.			Details Of water Harvesting			S.No.	Location	Roof Area (m ²)	1.	Engineering Building	725	2.	Load Center Building	1458	3.	Store Building	1620	4.	Captive Power Plant-I	1200					
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viii	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities	Earmarked capital for environmental projects will be used exclusively for its implementations as maintained in EIA / EMP Reports. We shall implement this condition as per Enterprise Social Commitment scheme. CSR Report for the period from April 2022 to Sept. 2022 is attached in Annexure-VI.																										

	in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.													
ix	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Lucknow. The funds so provided shall not be diverted for any other purpose.	<p>We agree the condition and complying. Environmental expenditure incurred during the period from April 2022 to Sept. 2022 for environment protection measures is given below.</p> <table border="1"> <thead> <tr> <th colspan="3">Mangalam Cement Ltd</th> </tr> <tr> <th colspan="3">Environmental expenditure incurred during the period from -April 2022 to Sept. - 2022 for environment protection measures.</th> </tr> <tr> <th>S. No.</th> <th>Department</th> <th>Total Cost (In Rs.)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Total Expenditures</td> <td>102302086.72</td> </tr> </tbody> </table>	Mangalam Cement Ltd			Environmental expenditure incurred during the period from -April 2022 to Sept. - 2022 for environment protection measures.			S. No.	Department	Total Cost (In Rs.)	1.	Total Expenditures	102302086.72
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S. No.	Department	Total Cost (In Rs.)												
1.	Total Expenditures	102302086.72												
x	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/ 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.	We have put the clearance letter on the website of the company.												
xi	The project proponent shall upload the status of compliance of 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	We are uploading every six monthly report of plant monitoring results and compliance report of Environmental clearance condition time to time at our web site and same data are being send to the RO, Lucknow, CPCB, RPCB and Zonal office.												

	the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	
xii	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of this Ministry at Lucknow/ CPCB/SPCB shall monitor the stipulated conditions.	The resulting monitoring data are being submitted, six monthly reports in the month of June and Dec. every year and same copy being sent to the Regional office Lucknow, RPCB and Central Pollution Control Board.
xiii	The environmental statement for each financial year ending 31 st 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.	We are submitting Environmental Statement before 30 th September in every year and same data available at web site and one copy being sent by e-mail to the Regional office of the MoEF at Lucknow.
xiv	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be sent at website of the Ministry of Environment, Forest and Climate Change (MoEFCC) at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at	We had advertised information of Environmental clearance letter in two local newspapers in local language of the locality concerned and same copy sent to the Rajasthan Pollution Control Board, Jaipur and the Regional office at Lucknow.

	Lucknow.	
xv	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 date of commencing the land development work.	We will inform the regional office as well as to the ministry the date of financial closure and final approval of the project.

(All value in mg/Nm3)

Dated	Unit - I						Unit - II						Unit - III	CPP - I			CPP - II		
	Kiln - I (PM)	Kiln - I (NOx)	Kiln - I (SO2)	Cooler - I (PM)	Cement Mill - I (PM)	Coal Mill - I (PM)	Kiln - II (PM)	Kiln - II (NOx)	Kiln - II (SO2)	Cooler - II (PM)	Cement Mill - II (PM)	Coal Mill - II (PM)		Cement Mill - III (PM)	Nox	SO2	PM	Nox	SO2
01.04.2022	26.34	692.19	24.06	18.73	16.12	12.28	20.47	690.89	2.39	21.32	16.42	12.12	13.14	245.08	514.64	40.7	0	0	0.12
02.04.2022	21.41	701.32	13.37	19.51	13.07	12.22	20.38	690.96	3.58	21.1	19.26	12.34	4.64	223.07	462.81	41.31	0	0	0.11
03.04.2022	18.63	700.94	16.26	20.48	17.33	12.9	19.29	564.83	7.28	20	20.06	10.89	5.7	221.34	464	42.23	0	0	0.12
04.04.2022	18.54	691.59	16.94	20.03	17.34	12.23	13.91	296.31	9.27	19.65	18.34	2.38	10.21	219.99	440.98	40.08	0	0	0.12
05.04.2022	19.71	685.28	11.68	19.24	18.51	12.24	16.52	428.32	6.55	15.94	19.99	6.51	9.99	225.75	457.72	42.01	0	0	0.12
06.04.2022	21.49	686.69	11.12	19.95	14.74	9.38	20.33	620.85	4.22	18.92	8.63	8.82	11.11	228.77	467.93	41.91	0	0	0.12
07.04.2022	20.75	659.55	3.93	19.85	6.69	5.03	16.75	512.9	5.25	15.64	17.86	8.53	9.57	230.58	467.18	41.37	0	0	0.12
08.04.2022	18.53	684.79	0	19.82	0	11.46	19.67	404.42	7.82	18.53	20.65	7.52	11.53	232.62	462.37	41.35	0	0	0.12
09.04.2022	18.07	686.91	14.84	19.35	13.66	12.5	20.01	618.01	20.3	18.61	15.05	5.95	9.48	233.82	472.23	40.58	4.1	5.63	0.12
10.04.2022	19.82	582.45	43.61	19.03	16.9	10.11	19.27	386.6	2.17	14.62	20.53	4.92	4.83	229.39	463.05	40.54	0	0	0.12
11.04.2022	19.5	606.35	12.55	22.87	18.78	13.76	22.97	605.25	6.99	23.96	20.57	19.67	11.01	151.55	176.73	38.32	0	0	0.12
12.04.2022	20.6	733.86	19.29	19.89	17.55	12.05	20.19	436.08	13.47	20.12	18.2	7.63	15.37	284.96	257.96	38.28	0	0	0.12
13.04.2022	19.67	699.56	27.23	20.48	16.09	12.1	16.87	342.42	13.71	15.56	4.19	16.12	17.17	364.1	320.95	39.83	0	0	0.12
14.04.2022	20.44	700.83	31.97	21.19	17.86	11.56	10.04	0	4.58	0.59	0	0.22	15.92	387.45	407.45	41.88	0	0	0.12
15.04.2022	20.44	710.75	33.99	21.16	16.71	13.37	8.68	0	0.98	2.43	15.38	0.03	16.02	385.13	491.46	43.77	0	0	0.12
16.04.2022	18.74	703.67	34.56	21.11	16.24	12.21	3.96	0	5.54	7.64	15.18	0.03	16.57	320.54	533.49	44.82	0	0	0.12
17.04.2022	19.87	697.49	34.22	20.55	16.83	12.02	10.06	468.66	13.03	8.55	14.37	1.84	17.59	246.68	529.17	43.99	0	0	0.12
18.04.2022	21.36	678.93	36.08	20.91	17.31	12.42	18.44	702.08	4.01	17.41	14.98	5.83	15.55	260.89	537.08	44.02	0	0	0.12
19.04.2022	21.67	682.74	35.65	20.45	17.84	11.54	18.91	714.46	4.1	17.9	17.49	5.26	16.5	251.51	526.21	44.14	0	0	0.13
20.04.2022	20.51	686.66	35.44	19.97	18.76	10.3	22.4	528.16	31.39	18.06	18.31	6.38	17.7	266.39	527.57	44.04	0	0	0.13
21.04.2022	17.02	750.59	39.63	15.21	15.82	10.35	26.01	658.8	37.99	16.56	18.61	0.02	15.83	214.9	543.44	45.04	0	0	0.12
22.04.2022	19.3	706.48	34.67	20.25	6.96	10.86	23.12	665.47	36.74	18.14	19.55	11.91	16.71	267.53	483.87	43.06	0	0	0.11
23.04.2022	19.4	702.2	42.82	19.68	17.94	11.2	23.05	664.63	49.6	17.99	19.39	11.15	16.8	330.08	487.66	43.73	5.76	8.28	0.11
24.04.2022	21.5	684.34	34.51	19.74	17.49	10.61	22.98	684.35	36.74	17.88	17.41	10.41	17.44	339.5	482.11	41.52	0	0	0.12
25.04.2022	21.43	684.53	35.5	20.08	17.91	10.98	22.95	668.79	30.72	17.88	19.45	16.42	17.28	237.52	468.85	40.41	0	0	0.12
26.04.2022	19.79	697.24	35.55	21.7	17.87	11.59	23.03	671.64	31.32	18.01	19.61	11.57	9.32	245.54	483.43	40.44	0	0	0.12
27.04.2022	18.83	704.02	34.61	20.97	17.89	11.44	22.84	669.59	38.5	17.93	7.25	17.32	16.33	250.21	422.55	40.62	0	0	0.12
28.04.2022	20.54	680.23	35.7	19.63	17.92	11.49	23.09	665.76	44.25	18.01	12.08	10.82	16.99	256.81	205.89	40.86	0	0	0.12
29.04.2022	21.15	642.8	38.35	19.56	18.23	12.32	23	691.19	44.12	17.97	17.65	12.99	18.14	263.94	232.81	44.45	0	0	0.12
30.04.2022	20.06	675.12	35.79	21.39	7.33	11.58	23.16	676.92	34.57	17.9	5.77	13.64	7.85	266.42	225.93	42.7	0	0	0.12

Mangalaram Cement Ltd. Worak, Kota (Rajasthan)
 Annual Emission Monitoring System for the Month of May

P. (All value in mg/Nm³)

Dated	Unit - I										Unit - II										Unit - III					CPP - I					CPP - II				
	Kiln - I (PM)	Kiln - I (NOx)	Kiln - I (SO ₂)	Cooler - I (PM)	Cement Mill - I (PM)	Coal Mill - I (PM)	Kiln - II (PM)	Kiln - II (NOx)	Kiln - II (SO ₂)	Cooler - II (PM)	Cement Mill - II (PM)	Coal Mill - II (PM)	Cement Mill - III (PM)	Nox	SO ₂	PM	Nox	SO ₂	PM	Nox	SO ₂	PM	Nox	SO ₂	PM										
01.05.2022	22.6	624.63	37.99	16.21	17.52	13.96	20.19	671.07	39.96	22.05	0	0.02	18.46	256.2	191.74	45.6	0	0	45.6	0	0	0	0	0	0	0									
02.05.2022	19.67	637.09	37.99	21.75	0	14.06	21.08	657.15	49.78	15.61	17.19	20.32	0.29	255.32	225.7	44.92	0	0	44.92	0	0	0	0	0	0	0.12									
03.05.2022	20.39	769.86	37.99	24.87	18.19	14.36	23.17	641.35	36.03	18.14	20.96	22.43	17.79	280.38	434.66	39.86	0	0	39.86	0	0	0	0	0	0	0.11									
04.05.2022	10.49	690.9	28.17	20.51	18.46	12.13	18.91	628.37	25.87	13.09	15.34	20.77	13.57	281.97	220.04	47.88	0	0	47.88	0	0	0	0	0	0	0.12									
05.05.2022	24.58	637.55	32.42	24.87	18.01	13.67	24.41	629.55	23.91	19.59	21.09	22.21	15.92	279.5	231.12	40.47	0	0	40.47	0	0	0	0	0	0	0.12									
06.05.2022	23.98	687.84	36.35	20.51	17.42	11.81	24.45	684.29	30.46	20.75	0	22.05	13.3	272.09	233.09	42.48	0	0	42.48	0	0	0	0	0	0	0.12									
07.05.2022	21.78	706.17	51.74	19.91	0	12.98	20.79	398.56	32.1	15.44	16.27	0.02	14.58	268.38	378.79	41.07	0	0	41.07	0	0	0	0	0	0	0.12									
08.05.2022	24.64	755.53	37.99	25.38	17.57	13.24	26.08	341.47	48.14	18.88	20.55	0.02	17.03	278.62	278.62	38.97	0	0	38.97	0	0	0	0	0	0	0.12									
09.05.2022	18.17	757.17	48.14	24.86	19.31	14.2	22.66	224.91	28.17	19.52	15.93	0.02	10.92	241.2	571.01	39.72	0	0	39.72	0	0	0	0	0	0	0.12									
10.05.2022	19.66	696.54	51.74	20.51	19.96	15.69	27.08	644.18	28.17	24.88	18.17	0.03	16.21	204.67	507.51	38.57	0	0	38.57	0	0	0	0	0	0	0.12									
11.05.2022	19.17	696.54	48.14	19.67	0	13.76	21.81	644.18	36.03	18.6	20.17	0.03	17.75	216.67	550.82	44.47	0	0	44.47	0	0	0	0	0	0	0.11									
12.05.2022	21.51	694.42	48.14	24.86	16.48	11.24	19.91	593.21	35.7	20.63	18.08	15.22	16.83	210.85	518.34	31.93	0	0	31.93	0	0	0	0	0	0	0.11									
13.05.2022	20.88	739.08	48.14	24.86	16.91	14.96	23.39	605.95	36.03	20.39	21.1	19.42	14.67	214.73	574.2	46.13	0	0	46.13	0	0	0	0	0	0	0.12									
14.05.2022	20.74	694.42	54.04	19.31	17.42	13.44	24.42	679.33	42.58	21.64	15.68	0.02	0.18	220.73	497.17	37.2	0	0	37.2	0	0	0	0	0	0	0.12									
15.05.2022	23.66	695.84	46.18	18.16	18.74	9.92	20.79	695.38	38.32	17.35	15.72	19.8	14.42	222.14	319.97	39.54	0	0	39.54	0	0	0	0	0	0	0.12									
16.05.2022	21.78	659.65	30.46	20.64	20.57	10.59	20.29	667.06	36.03	16.7	21.6	19.47	15.81	227.79	462.22	42.7	0	0	42.7	0	0	0	0	0	0	0.12									
17.05.2022	20.24	659.65	32.42	19.2	19.27	12.45	24.92	666.59	25.87	22.2	0	21.95	17.64	245.61	457.05	36.06	0	0	36.06	0	0	0	0	0	0	0.12									
18.05.2022	20.6	659.41	28.17	25.11	0	10.16	22.67	610.44	33.73	19.11	18.13	18.92	11.44	223.2	328.58	41.59	0	0	41.59	0	0	0	0	0	0	0.12									
19.05.2022	21.75	661.53	24.56	27.55	16.24	11.96	23.17	614.21	39.96	20.19	0	21.08	16.16	266.62	462.47	36.88	0	0	36.88	0	0	0	0	0	0	0.12									
20.05.2022	10.98	694.42	55.67	24.87	19.97	15.13	18.11	615.86	48.14	14.02	19.15	23.25	14.01	155.08	51.45	34.95	0	0	34.95	0	0	0	0	0	0	0.12									
21.05.2022	22.72	670.22	43.88	16.19	18.89	16.54	18.19	209.81	37.99	14.54	17.79	0.03	14.42	155.08	51.45	34.95	0	0	34.95	0	0	0	0	0	0	0.12									
22.05.2022	14.28	506.19	24.56	19.17	0	0.01	27.96	336.75	32.1	25.91	18.2	23.27	13.5	278.97	473.3	37.04	0	0	37.04	0	0	0	0	0	0	0.12									
23.05.2022	17.78	696.78	24.56	18.91	17.33	21.23	25.08	627.9	42.25	22.42	0	18.23	15.04	275.09	492.74	36.32	0	0	36.32	0	0	0	0	0	0	0.12									
24.05.2022	23.43	686.9	39.63	16.94	15.73	0.01	19.2	21.77	16.05	15.41	15.4	0.03	21.15	197.96	113.72	42.22	0	0	42.22	0	0	0	0	0	0	0.12									
25.05.2022	23.66	21.15	57.31	21.46	18.77	0.01	0.03	0	19.98	25.45	20.07	0.02	17.36	270.14	286.25	34.45	0	0	34.45	0	0	0	0	0	0	0.12									
26.05.2022	0.01	1.41	13.1	0	0	0	10.23	6.9	18.34	10.21	20.05	0.02	19.02	279.15	452.87	42.74	0	0	42.74	0	0	0	0	0	0	0.12									
27.05.2022	13.79	1.41	14.08	0.01	16.4	0	25.86	458.26	36.35	21.79	18.35	18.35	15.25	263.44	485.36	41.83	0	0	41.83	0	0	0	0	0	0	0.12									
28.05.2022	9.6	138.65	10.15	22.86	0	0	21.74	617.04	33.08	15.56	21.26	18.98	18.96	282.32	492.25	44.51	0	0	44.51	0	0	0	0	0	0	0.12									
29.05.2022	20.63	502.43	32.1	16.83	0.02	18.98	21.15	237.42	41.92	17.16	15.68	16.63	14.37	184.37	34.23	44.78	0	0	44.78	0	0	0	0	0	0	0.12									
30.05.2022	22.46	660.82	37.66	21.59	15.68	0	25.01	634.27	26.53	20.99	20.56	19.73	0.29	266.97	495.69	41.01	0	0	41.01	0	0	0	0	0	0	0.12									
31.05.2022	17.48	581.86	51.74	21.39	16.61	19.11	20.15	647.24	33.73	16.08	20.5	18.66	14.28	279.32	490.28	44.4	0	0	44.4	0	0	0	0	0	0	0.12									

() Mangalam Cement Ltd. Morak, Kota (Rajasthan) (

Day Average Report of Continuous Emission Monitoring System for the Month of June 2022, (All value in mg/Nm3)

Dated	Unit - I										Unit - II				Unit - III			CPP - I			CPP - II		
	Kiln - I (PM)	Kiln - I (NOx)	Kiln - I (SO2)	Cooler - I (PM)	Cement Mill - I (PM)	Coal Mill - I (PM)	Kiln - II (PM)	Kiln - II (NOx)	Kiln - II (SO2)	Cooler - II (PM)	Cement Mill - II (PM)	Coal Mill - II (PM)	Cement Mill - III (PM)	Nox	SO2	PM	Nox	SO2	PM	Nox	SO2	PM	
01.06.2022	17.35	691.37	39.63	15.34	19.06	20.48	27.95	654.09	25.87	23.95	17.03	19.96	19.73	250.91	477.48	34.99	0	0	0	0	0	0.12	
02.06.2022	21.66	675.86	40.28	17.15	19.22	19.14	20.23	640.17	30.13	16.2	17.91	20.82	0.29	245.07	425.89	37.65	0	0	0	0	0	0.11	
03.06.2022	15.54	665.99	23.25	16.26	20.04	19.67	26.95	684.29	39.96	22.95	17.85	0.04	17.67	244.34	420.96	37.91	0	0	0	0	0	0.12	
04.06.2022	16.87	665.76	23.25	19.56	19.32	21.64	24.3	728.41	49.78	20.19	18.36	0.04	15.98	257.53	414.92	36.35	0	0	0	0	0	0.12	
05.06.2022	26.3	696.07	57.31	21.75	19.49	0.01	27.95	263.13	70.08	23.95	20.77	0.05	15.39	231.43	420.01	37.09	0	0	0	0	0	0.11	
06.06.2022	19.68	746.36	58.29	18.78	19.59	19.32	25.95	9.73	12.44	14.55	18.78	0.05	10.75	230.12	415.08	36.72	0	0	0	0	0	0.11	
07.06.2022	10.15	743.07	58.62	16.19	0.01	0.01	21.9	1.24	8.19	15.49	0	0.04	12.82	231.66	378.65	36.9	0	0	0	0	0	0.11	
08.06.2022	0.01	351.33	52.4	22.46	0	0.01	19.5	0	2.62	15.49	19.15	0.04	15.52	238.78	316.62	36.82	0	0	0	0	0	0.11	
09.06.2022	18.74	706.88	25.22	17.63	19.48	17.6	9.88	0	2.62	9.84	21.66	0.05	12.37	241.13	342.7	36.83	0	0	0	0	0	0.12	
10.06.2022	21.52	679.39	24.56	20.65	15.57	17.8	0.03	0	2.62	0	16.48	0.04	15.85	226.27	246.71	42.06	0	0	0	0	0	0.12	
11.06.2022	22.42	754.11	20.63	21.76	17.35	17.93	0.01	0	2.62	0	16.42	0.03	16.58	264.14	255.48	31.69	0	0	0	0	0	0.12	
12.06.2022	25.23	709.7	19.65	20.51	15.8	18.45	0.04	0	6.22	0	0	0.05	13.86	239.04	151.42	39.69	0	0	0	0	0	0.12	
13.06.2022	23.21	754.82	19.65	23.33	18.45	18.74	8.98	705.99	27.51	14.89	0	19.67	15.55	271.24	255.44	41.75	0	0	0	0	0	0.12	
14.06.2022	24.14	669.98	19.65	13.36	15.9	18.39	27.48	576.93	24.89	14.54	19.42	16.26	17.7	266.13	196.89	41.2	0	0	0	0	0	0.12	
15.06.2022	18.44	715.58	34.06	18.91	17.75	19.93	22.66	0	21.61	15.19	17.31	0.05	14.93	265.77	187.95	39.14	0	0	0	0	0	0.12	
16.06.2022	23.71	641.08	15.72	22.41	15.35	0.01	11.89	0	4.91	9.91	19.58	0.04	13.43	266.99	195.76	40.46	0	0	0	0	0	0.11	
17.06.2022	22.92	744.95	14.74	19.84	15.58	19.43	0.04	0	6.88	0	0	0.04	13.61	264.57	187.48	42.96	0	0	0	0	0	0.12	
18.06.2022	21.52	699.83	19	21.74	20.67	21.64	17.17	531.87	16.38	18.79	21.32	15.34	15.15	263.93	184.82	42.28	0	0	0	0	0	0.12	
19.06.2022	15.38	712.28	12.77	23.19	20.68	21.64	22.38	493.88	6.88	20.24	20.12	16.58	12.72	261.71	192.58	43.79	0	0	0	0	0	0.12	
20.06.2022	19.76	608.41	26.85	18.92	17.24	21.64	23.75	606.66	14.08	23.36	21.05	17.24	15.3	256.41	198.06	44.08	0	0	0	0	0	0.11	
21.06.2022	15.61	632.15	15.06	22.13	20.62	20.98	21.04	618.93	16.38	22.06	21.38	16.73	13.1	270.14	189.77	46.85	0	0	0	0	0	0.1	
22.06.2022	21.48	660.82	14.08	23.15	16.98	19.07	16.6	724.87	22.92	18.38	20.01	13.38	16.19	349.04	309.73	43.98	0	0	0	0	0	0.11	
23.06.2022	17.49	696.54	20.31	17.91	0	20.98	19.64	536.59	19.65	20.55	16.98	9.74	17.91	410.01	371.02	40.49	0	0	0	0	0	0.11	
24.06.2022	17.5	592.67	16.38	23.66	15.19	20.98	17.1	563.48	15.72	18.74	20.46	16.04	17.96	401.81	256.96	42.98	0	0	0	0	0	0.12	
25.06.2022	16.65	693.96	19	20.01	16.43	18.13	25.2	678.15	18.01	24.45	16.85	14.63	13.96	411.67	286.53	42.42	4.29	5.56	0	0	0	0.12	
26.06.2022	17.48	573.64	17.03	18.58	0	20.98	19.63	634.27	26.2	23.51	19.63	13.95	15.24	407.63	284.88	41.6	0	0	0	0	0	0.12	
27.06.2022	24.59	715.34	28.17	17.15	17.47	21.64	20.79	734.31	23.58	21.33	18.01	14.45	13.61	407.73	339.95	43.54	0	0	0	0	0	0.12	
28.06.2022	15.49	686.9	15.72	15.07	0	0.01	23.61	658.8	15.39	20.04	15.61	0.02	13.88	407.08	310.22	44.44	0	0	0	0	0	0.12	
29.06.2022	16.13	689.26	15.72	21.96	17.42	19.09	23.61	689.24	19.65	23.29	15.82	0.04	19.72	405.1	273.58	45.16	0	0	0	0	0	0.12	
30.06.2022	15.81	689.26	15.72	16.61	17.42	17.6	23.61	689.24	19.65	23.29	15.82	0.04	17.79	425.8	311.6	44.69	0	0	0	0	0	0.12	

Dated	Unit - I						Unit - II						Unit - III			CPP - I			CPP - II	
	Kiln - I (PM)	Kiln - I (NOx)	Kiln - I (SO ₂)	Cooler - I (PM)	Cement Mill - I (PM)	Coal Mill - I (PM)	Kiln - II (PM)	Kiln - II (NOx)	Kiln - II (SO ₂)	Cooler - II (PM)	Cement Mill - II (PM)	Coal Mill - II (PM)	Cement Mill - III (PM)	Nox	SO ₂	PM	Nox	SO ₂	PM	
01.07.2022	15.81	689.26	15.72	16.61	17.42	17.6	23.61	689.24	19.65	23.29	23.29	15.82	15.82	0.04	17.79	425.8	311.6	44.69	0	0.12
02.07.2022	15.81	689.26	15.72	16.61	17.42	17.6	23.61	689.24	19.65	23.29	23.29	15.82	15.82	0.04	17.79	425.8	311.6	44.69	0	0.12
03.07.2022	21.02	744.95	21.61	18.78	16.27	0	16.88	638.28	24.56	18.58	20.48	20.48	0.02	12.79	0.3	0	0	294.32	160.73	31.62
04.07.2022	15.85	591.49	16.38	21.98	20.75	18.88	17.31	607.61	19.98	18.94	15.02	15.02	12.18	16.87	0.3	0	0	214.55	118.15	39.16
05.07.2022	16.54	659.17	22.92	15.07	19.75	0	23.02	647.01	15.06	22.92	17.15	17.15	12.39	9.81	0.3	0	0	345.15	293.39	31.04
06.07.2022	22.2	702.65	25.87	26.32	19.87	18.49	20.14	588.49	33.73	20.81	16.15	16.15	12.56	13.42	0.3	0	0	251.44	155.32	42.54
07.07.2022	19.68	687.38	19.98	16.54	20.35	0.01	18.39	693.02	35.04	19.66	0	0	12.07	0.29	0.3	0	0	304.03	207.74	35.27
08.07.2022	17.48	667.16	19	21.74	20.89	17.77	19.49	665.41	35.04	20.46	17.95	17.95	10.33	0.18	0.3	0	0	329.97	228.9	45.19
09.07.2022	20.71	758.34	21.29	21.74	17.63	0	23.75	689	19.65	23.42	0	0	0.02	0.23	0.3	0	0	351.33	154.58	36.08
10.07.2022	21.5	731.79	18.34	26.32	19.53	16.93	25.29	681.93	18.34	19.66	19.63	19.63	11.91	0.27	0.3	0	0	358.39	331.04	45.19
11.07.2022	20.56	684.09	19.32	26.32	16.42	16.27	23.24	649.37	14.08	22.99	21.37	21.37	9.41	0.29	0.3	0	0	304.91	184.6	45.18
12.07.2022	24.57	684.09	23.25	20.61	15.36	17.76	17.89	570.09	32.75	19.3	0	0	10.22	0.23	0.3	0	0	409.39	459.51	45.18
13.07.2022	16.79	704.77	28.17	19.44	16.16	19.16	16.88	646.54	13.43	20.04	18.17	18.17	13.54	0.29	0.3	0	0	364.21	299.79	41.63
14.07.2022	12.03	3.76	9.5	0.01	15.56	0	19.41	665.17	16.05	20.39	16.75	16.75	11.7	0.23	0.3	0	0	400.92	263.11	45.19
15.07.2022	15.43	61.81	9.17	13.68	15.56	0	22.67	612.56	33.73	22.64	20.99	20.99	9.58	0.29	0.3	0	0	321.33	558.95	41.93
16.07.2022	22.36	754.82	24.56	19.17	15.57	18.45	22.16	661.16	42.9	22.27	19.47	19.47	13.98	0.23	0.3	0	0	254.97	322.92	45.18
17.07.2022	24.57	690.2	39.3	19.64	15.19	19.31	20.98	661.64	19.65	23.36	17.3	17.3	15.55	0.23	0.3	0	0	187.55	9.12	45.19
18.07.2022	19.84	573.16	22.92	22.64	16.49	16.35	18.33	712.36	19.98	22.2	16.98	16.98	12.73	0.29	0.3	0	0	414.16	304.71	45.08
19.07.2022	19.34	719.34	38.32	17.51	20.47	0.01	20.42	669.42	14.08	21.04	0	0	14.9	0.23	0.3	0	0	324.15	130.46	42.08
20.07.2022	21.96	591.03	37.99	20.31	15.29	20.01	25.42	702.93	17.36	19.96	16.38	16.38	16.19	0.23	0.3	0	0	409.39	270.74	39.04
21.07.2022	19.94	564.47	41.26	25.11	17.35	18.31	22.96	700.8	13.76	20.46	18.98	18.98	0.02	0.29	0.3	0	0	411.69	304.71	43.72
22.07.2022	20.63	717.22	39.3	22.64	16.39	17.87	19.14	535.88	14.41	20.19	18.34	18.34	13.21	17.12	0.3	0	0	387.51	233.58	43.33
23.07.2022	18.84	747.07	19	18.16	18.78	14.75	16.16	603.59	18.67	18.06	18.01	18.01	10.56	10.88	0.65	0	0	407.98	408.57	44.61
24.07.2022	21.49	755.05	31.44	22.46	0	17.33	25.64	679.33	15.39	20.34	18.87	18.87	10.84	14.22	0.65	0	0	407.98	234.07	42.75
25.07.2022	18.59	744.01	27.84	25.38	17.52	14.92	25.42	699.15	18.34	24.54	20.99	20.99	16.09	14.64	0.65	0	0	408.86	247.36	43.28
26.07.2022	20.87	753.88	21.94	24.24	19.96	15.62	24.05	690.42	17.03	23.58	18.61	18.61	15.82	11.91	0.65	0	0	404.45	212.66	43.99
27.07.2022	22.55	712.52	23.25	20.31	0.01	16.37	17.95	531.4	19	19.39	0	0	14.68	16.94	0.3	0	0	413.27	121.1	43.31
28.07.2022	21.49	695.13	17.36	23.36	0.01	14.48	25.77	640.64	14.08	24.54	0	0	14.63	11.54	0.3	0	0	295.38	582.33	43.92
29.07.2022	20.74	703.83	31.44	18.23	15.52	14.02	21.23	607.61	15.39	21.63	0	0	14.74	20.32	0.3	0	0	273.32	548.61	33.71
30.07.2022	20.17	682.67	33.08	22.69	0	0	18.25	664.94	16.05	19.52	0	0	0.04	15.59	0.48	0	0	363.68	440.07	28.27
31.07.2022	21.79	414.07	37.66	17.68	20.4	0	0.03	0	2.95	0	0	0	0.04	14.79	0.65	0	0	391.57	324.15	39.47

Dated	Unit - I							Unit - II				Unit - III			CPP - I			CPP - II		
	Kiln - I (PM)	Kiln - I (NOx)	Kiln - I (SO2)	Cooler - I (PM)	Cement Mill - I (PM)	Coal Mill - I (PM)	Kiln - II (PM)	Kiln - II (NOx)	Kiln - II (SO2)	Cooler - II (PM)	Cement Mill - II (PM)	Coal Mill - II (PM)	Cement Mill - III (PM)	Nox	SO2	PM	Nox	SO2	PM	
01.08.2022	6.51	682.21	24.89	21.88	18.94	13.02	0.01	0	2.95	0	18.39	0.04	14.64	0.65	0	0	387.33	196.17	37.43	
02.08.2022	26.79	665.99	30.78	20.85	0	15.96	0.03	0	0.65	0	20.02	0.04	17.39	0.65	0	0	361.39	304.71	36.99	
03.08.2022	21.75	665.52	24.89	26.2	0	0	25	644.18	23.91	23	18.56	9.86	16.55	0.3	0	0	332.8	536.55	34.89	
04.08.2022	18.84	700.07	21.61	19.67	0	0	22.67	682.4	26.53	20.69	21.21	13.55	14.22	0.3	0	0	396.15	130.46	34.94	
05.08.2022	22.54	661.53	26.2	18.91	0.01	18	20.79	663.05	23.91	15.64	0	15.5	0.29	276.15	136.61	38.41	0	0	0.12	
06.08.2022	12.19	669.98	17.36	18.51	0	0	19.64	652.2	22.27	18.36	19.8	11.32	17.24	68.95	0	37.86	0	0	0.12	
07.08.2022	19.94	704.77	21.94	25.11	0	13.92	21.81	682.87	26.53	19.83	16.27	16.2	16.21	421.75	201.34	43.13	0	0	0.12	
08.08.2022	19.99	15.04	18.01	21.17	0.01	0	22.31	639.46	24.56	20.34	15.83	15.67	12.36	415.04	220.29	43.97	0	0	0.11	
09.08.2022	22.88	594.78	23.91	23.63	0.02	16.39	16.17	699.62	27.51	14.11	17.69	15.38	9.19	416.1	242.44	41.21	0	0	0.12	
10.08.2022	19.81	594.32	25.55	24.44	0.01	0	20.8	651.25	24.56	18.81	18.24	10.61	16.31	393.51	212.66	39.22	0	0	0.11	
11.08.2022	19.81	615.47	27.84	17.3	0.02	16.56	25.59	682.16	24.56	23.02	0	15.51	11.39	1.71	0	42.78	0	0	0.12	
12.08.2022	22.14	629.09	23.91	18.16	0.01	13.96	21.29	617.99	25.55	19.33	16.16	15	15.84	383.8	213.89	42.55	0	0	0.12	
13.08.2022	23.06	669.98	21.61	27.07	0.01	13.11	24.5	540.36	18.01	22.42	0	12.9	13.86	325.38	212.66	45.98	0	0	0.11	
14.08.2022	20.09	593.38	25.55	25.37	0	0	24.5	649.6	18.34	16.13	16.54	11.8	16.98	303.68	224.47	47.85	0	0	0.12	
15.08.2022	23.25	665.28	22.6	18.16	0	21.64	20.79	572.92	21.29	18.31	20.18	14.51	17.61	340.39	225.7	40.41	0	0	0.12	
16.08.2022	21.66	703.83	32.1	23.63	0.02	20.97	17.17	241.9	22.6	15.55	0	9.68	17.49	317.8	192.48	42.83	0	0	0.12	
17.08.2022	16.02	592.67	24.89	20.98	0	21.64	22.09	573.39	19.65	16.91	0	16.1	11.54	301.38	209.21	43.59	0	0	0.12	
18.08.2022	16.02	699.83	26.85	20.45	0	14.1	21.8	580.24	17.36	19.81	0	12.23	15.15	335.09	173.77	43.67	0	0	0.1	
19.08.2022	16.46	563.77	26.85	17.94	0	12.96	24.77	566.32	19.65	22.77	15.23	0.04	14.28	29.07	0	42.64	0	0	0.1	
20.08.2022	15.99	640.38	24.56	22.88	0	14.49	23.15	667.53	19	21.49	19.47	0.01	16.21	316.74	199.37	42.38	0	0	0.1	
21.08.2022	21.38	591.73	32.1	21.75	0	18.82	17.81	0	12.44	15.75	17.94	0.03	15.92	321.68	204.78	43.03	0	0	0.1	
22.08.2022	16.07	660.59	25.55	21.91	0	15.1	4.65	0	0.33	0	15.5	0.03	14.22	319.38	206.51	42.8	0	0	0.1	
23.08.2022	16.19	682.21	35.7	17.91	0	0	0.03	0	0.33	0	0	0.04	12.57	255.85	125.04	44.8	0	0	0.1	
24.08.2022	16.71	617.34	23.91	20.44	0	17.57	5.9	0	0.33	0	20.67	0.04	15.04	290.09	178.45	42.05	0	0	0.1	
25.08.2022	21.69	700.77	31.77	18.41	0	0	0.03	0	0.65	0	19.53	0.04	11.68	331.56	193.22	45.8	0	0	0.1	
26.08.2022	16.14	604.89	31.77	18.66	0	12.56	18.33	612.32	14.08	20.33	0	0.04	16.73	290.97	136.36	45.67	0	0	0.1	
27.08.2022	15.43	695.13	28.17	23.54	0	14.2	18.34	632.62	14.08	20.34	15.55	13.64	11.68	327.33	117.17	43.15	0	0	0.1	
28.08.2022	21.88	587.97	27.84	18.75	0.01	10.38	18.91	759.79	19	20.84	0	11.52	17.96	96.31	13.06	44.7	0	0	0.1	
29.08.2022	21.78	718.63	27.51	15.53	15.91	0	16.66	659.98	18.01	19.9	0	18.98	15.55	290.09	119.87	42.67	0	0	0.1	
30.08.2022	15.4	614.53	27.51	23.76	0.01	14.2	21.44	656.92	16.05	22.61	15.83	18.59	15.3	318.33	137.35	41.78	0	0	0.1	
31.08.2022	20.59	664.34	19.98	15.53	15.8	14.66	20.39	621.76	23.25	22.95	0	0.02	15.55	306.68	151.13	43.34	0	0	0.1	

Mangalam Cement Ltd. Morak, Kota (Rajasthan)

Day Average Report of Continuous Emission Monitoring System for the Month of September 2022, (All value in mg/Nm³)

Dated	Unit -I						Unit -II						Unit -III			CPP -I			CPP -II		
	Kiln - I (PM)	Kiln - I (NOx)	Kiln - I (SO ₂)	Cooler - I (PM)	Cement Mill - I (PM)	Coal Mill - I (PM)	Kiln - II (PM)	Kiln - II (NOx)	Kiln - II (SO ₂)	Cooler - II (PM)	Cement Mill - II (PM)	Coal Mill - II (PM)	Cement Mill - III (PM)	Nox	SO ₂	PM	Nox	SO ₂	PM		
01.09.2022	13.31	657.29	25.55	20.31	18.45	14.65	17.81	722.04	29.8	19.74	17.51	19.18	12.79	131.25	113.72	46.2	0	0	0.11		
02.09.2022	17.92	665.53	23.03	20.12	17.22	13.23	18.97	653.64	17.35	21	15.59	15.89	15.41	233.54	144.43	40.39	0	0	0.1		
03.09.2022	17.47	676.88	22.33	20.07	16.93	12.68	19.17	655.46	14.92	21.07	15	15.77	14.88	204.25	152.21	38.59	0	0	0.1		
04.09.2022	17.59	686.91	21.74	20.41	11.1	12.94	19.14	649.56	15.37	21.14	18.04	16.69	13.1	220.79	142.65	39.57	0	0	0.1		
05.09.2022	17.4	681.1	21.86	20.14	6.62	13.95	18.99	479.37	14.72	20.96	6.42	13.69	12.79	239.73	137.59	39.57	0	0	0.1		
06.09.2022	17.96	617.6	21.46	20.11	12.61	14.26	19.04	598.51	15.33	21.1	18.38	17.46	14.73	230.98	156.24	36.75	0	0	0.1		
07.09.2022	17.5	676.06	22.25	19.85	6.2	10.81	19.05	550.71	14.54	20.92	9.16	18.27	14.48	260.81	143.82	37.42	0	0	0.1		
08.09.2022	8.83	31.1	11.79	12.94	18.46	0	19.17	578.81	26.44	21.33	18.61	15.98	7.33	251.89	161.61	36.68	0	0	0.1		
09.09.2022	4.2	0.7	8.85	3.84	17.36	0	19.01	597.77	21.55	21.07	11.72	18.03	11.46	239.13	166.06	35.01	0	0	0.1		
10.09.2022	0.93	46.6	21.27	0	8.71	0	18.97	632.64	33.97	21.06	16.82	12.13	13.65	204.53	187.77	32.07	3.61	4.54	0.1		
11.09.2022	0.01	0.7	0.98	0	17.91	0	22.98	689.48	45.19	20.75	17.51	18.22	17.61	59.6	30.29	41.53	0	0	0.1		
12.09.2022	0.02	0.7	0.98	0	17.91	0	18.86	537.93	20.78	20.9	11.37	15.81	13.87	276.5	154.26	38.76	0	0	0.1		
13.09.2022	0.02	0.7	0.96	0	17.37	0	19.14	587.5	13.65	21.11	18.35	15.08	13.58	257.66	77.8	39.15	0	0	0.1		
14.09.2022	0.02	0.7	0.95	0	17.9	0	18.97	631.09	15.53	20.97	16.34	11.55	10.45	268	156.18	36.46	0	0	0.1		
15.09.2022	0.02	0.62	0.75	0	17.98	0	19.14	607.47	17.44	21.05	18.37	11.92	13.02	266.03	172.11	36.26	0	0	0.1		
16.09.2022	0.02	0.5	0.66	0.06	16.43	0	19.16	619.58	19.07	21.14	2.07	13.57	12.42	254.98	200.57	35.82	0	0	0.1		
17.09.2022	0.02	0.47	0.65	0	14.66	0	19.06	627.11	18.22	21	12.31	11.87	13.83	265.51	208.64	39.87	19.33	18.91	6.17		
18.09.2022	0.02	0.47	0.65	0	17.89	0	19.09	620.69	17.42	21.07	18.41	11.99	13.43	52.25	41.61	8.13	309.76	485.35	41.54		
19.09.2022	0.01	0.47	0.65	0.04	18.13	0	19.07	613.45	19.13	21.06	18.42	10.95	13.38	0.12	0	0	273.21	503.97	39.52		
20.09.2022	0.01	0.49	0.66	0	12.74	0	18.76	620.06	19.09	20.83	14.56	13.15	13.3	0.13	0	0	293.5	505.83	35.11		
21.09.2022	0.01	0.47	0.98	0	16.39	0	14.14	488.69	30.78	16.13	18.24	17.17	15.05	0.12	0	0	407.45	480.93	32.37		
22.09.2022	0.02	0.69	0.91	0.56	15.12	0	19.14	562	18.41	20.97	18.22	12.87	14.5	0.19	0	0	374.27	414.81	33.17		
23.09.2022	1.41	18.65	11.66	3.22	9.24	0	18.88	561.63	17.84	21.05	7.8	10.76	13.14	0.21	0	0	405.43	412.23	27.91		
24.09.2022	11.62	546.23	38.73	19.95	4.97	15.43	19.08	549.44	30.15	21.11	18.44	11.98	15.48	5.95	7.73	0	294.53	396.61	32.64		
25.09.2022	16.29	530.44	24.43	19.17	1.41	14.51	19.01	554.44	23.31	21.01	11.52	13.57	5.97	0.12	0	0	232.23	363.71	28.08		
26.09.2022	17.85	653.17	19.93	20.3	6.16	14.32	19.14	517.74	19.57	21.02	7.01	15.22	13.99	0.18	0	0	366.35	453.74	28.4		
27.09.2022	23.69	602.33	18.38	21.88	8.29	11.22	19.16	612.82	16.41	21.08	17.54	14.69	4.48	0.27	0	0	375.94	478.1	34.18		
28.09.2022	23.62	602.15	19.5	21.9	14.56	11.01	19.02	563.69	20.5	21.06	5.46	11.27	13.61	0.13	0	0	330.72	376.87	31.53		
29.09.2022	22.63	613.04	18.59	21.98	13.65	11	19.1	529.41	22.55	21.09	13.77	13.54	13.97	0.22	0	0	314.83	350.88	30.89		
30.09.2022	22.63	642.75	18.44	21.75	16.77	11.93	19.1	573.89	20.59	21.1	13.88	11.07	14.08	0.23	0	0	278.84	336.56	29.68		

Mangalam Cement Ltd. (Morak)

(APCM & CEMS Installation Status Report with Measured Emission Values)

Unit-I		Details of Stack	Stack Attached with	Height (M)	Dia (M)	CEMS Installation Status	Concentration of Emission (mg/Nm ³)		
Stack No.	Norms						April 22 to June 22	July 22 to Sept. 22	Avg.
1	Kiln Main Stack	Hybrid Bag house	145	4	PM	30	18.80	25.55	22.17
2	Clinker Cooler Stack	ESP	35	3.3	PM	30	21.83	21.60	21.71
3	Cement mill Stack	Bag house	30	1.2	PM	30	15.60	17.80	16.70
4	Vertical Coal mill stack	Bag house	53	1.15	PM	30	13.20	15.90	14.55
Unit-II		Details of Stack	Stack Attached with	Height (M)	Dia (M)	CEMS Installation Status	Concentration of Emission (mg/Nm ³)		
Stack No.	Norms						April 22 to June 22	July 22 to Sept. 22	Avg.
1	Kiln Main Stack	Hybrid Bag house	100	3.2	PM	30	23.63	19.15	21.39
2	Clinker Cooler Stack	ESP	35	3.3	PM	30	18.45	20.99	19.72
3	Cement mill Stack	Bag house	30	0.9	PM	30	19.75	18.85	19.30
4	Coal mill stack	Bag house	60	1.35	PM	30	20.20	16.15	18.17
Unit-III		Details of Stack	Stack Attached with	Height (M)	Dia (M)	CEMS Installation Status	Concentration of Emission (mg/Nm ³)		
Stack No.	Norms						April 22 to June 22	July 22 to Sept. 22	Avg.
1	Cement Mill Stack	Bag House	45	0.66	PM	30	13.96	12.82	13.39

Stack No.	Details of Stack	Stack Attached with	Height (M)	Dia (M)	CEMS Installation Status	Concentration of Emission (mg/Nm ³)					
						Norms	April 22 to June 22		July 22 to Sept. 22		Avg.
							April 22 to June 22	July 22 to Sept. 22	July 22 to Sept. 22	Avg.	
1	Main Stack Power plant - I	ESP	77	2.5	PM	50	NR	NR	NR	31.41	
					SO ₂	600	NR	NR	NR	501.21	
					NO _x	450	243.69	NR	NR	243.69	
CPP-II											
1	Main Stack Power plant - II	ESP	77	2.5	PM	50	NR	NR	NR	38.10	
					SO ₂	600	NR	NR	NR	521.50	
					NO _x	450	NR	NR	NR	351.50	

Mangalam Cement Ltd. (Morak)

Ambient Air Quality Monitoring Results (All values in $\mu\text{g}/\text{m}^3$)

Sr No	Location/ Parameters ↓	Norms	Near Railway Gate		Near Security Gate		Near Rack Loading Area		Near Work Shop					
			April 22 to June22	July 22 to Sept. 22	April 22 to June22	July 22 to Sept. 22	April 22 to June22	July 22 to Sept. 22	April 22 to June22	July 22 to Sept. 22	Avg.			
1	PM10	100	62.58	59.48	61.03	60.01	54.78	57.39	59.84	51.85	55.85	66.84	61.24	64.04
2	PM2.5	60	30.91	26.40	28.65	30.32	24.46	27.39	27.55	24.82	26.18	34.02	28.62	31.32
3	SO ₂	80	9.91	8.96	9.43	9.47	8.34	8.90	7.79	7.40	7.59	9.03	8.24	8.63
4	NOx	80	17.67	16.42	17.04	16.14	13.80	14.97	17.04	15.28	16.16	16.85	14.90	15.87
5	CO	4000	0.35	0.30	0.325	0.31	0.26	0.285	0.420	0.34	0.38	0.50	0.44	0.470

Mangalam Cement Ltd. (Morak)

Ambient Noise Monitoring Report (All values in (dB)A)

Sr. No.	Location	April 22 to June 22		July 22 to Sept. 22		Day Avg.	Night Avg.
		Day	Night	Day	Night		
		1	Near Security Gate	59.74	55.30	63.20	52.44
2	Near Railway Gate	64.74	52.01	62.84	48.80	63.79	50.40
3	Near Rack Loading Area	65.24	47.74	63.24	45.62	64.24	46.68
4	Near Work Shop	66.04	56.70	63.40	54.36	64.72	55.53

Mangalam Cement Ltd. (Morak)

Results of Fugitive Emission (All values in $\mu\text{g}/\text{m}^3$)

S.No.	Location	April 22 to June 22	July 22 to Sept. 22	Avg.
Common Location				
1	Raw Material Storage Area-I & II	466	440	453
2	Near Coal Storage area- I & II	466	402	434
3	Near Additive Storage I & II	482	464	473
4	Near Packing Plant-I & II	488	440	464
5	Near Time Office	220	372	296
Unit-I				
6	Near Crusher-I	216	396	306
7	Near Cement Mill-I	344	332	338
8	Stacker & Reclaimer-I	226	450	338
Unit-II				
9	Near Crusher-II	229	406	317.5
10	Near Cement Mill-II	332	448	390
11	Stacker & Reclaimer-II	295	441	368
12	Near Clinker Stock Pile (CSP)-II	401	436	418.5
Unit-III				
13	Near Packing Plant-III	476	446	461
14	Near Cement Mill-III	384	405	394.5
CPP-I & II				
15	Near Coal Storage (CPP-I & II)	466	390	428

Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL/AA/06	Report No.:	VEL /A/2205110005/A
Name & Address of Party:	M/s Mangalam Cement Ltd. P.O. Aditya Nagar -Morak Kota Rajasthan	Format No.:	7.8 F-01
		Party Reference No.:	NIL
		Reporting Date:	16/05/2022
		Period of Analysis:	11-16/05/2022
		Receipt Date:	11/05/2022

Sample Description : AMBIENT AIR QUALITY MONITORING

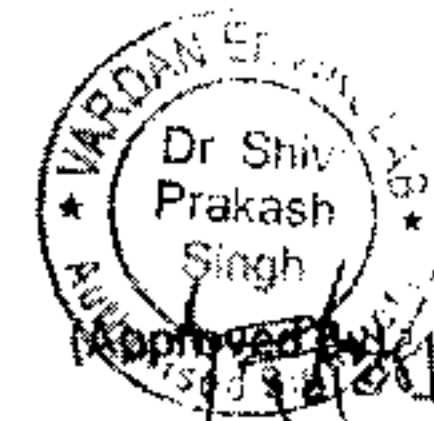
General Information:-

Sample collected by	: Vardan EnviroLab Team
Sampling Location	: Near Avalimeri Mahal Darrah Village
Instrument Used	: VEL/Combo-42
Instrument Calibration Status	: Calibrated
Latitude	: 24°48'54"
Longitude	: 75°59'6"
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 08/05/2022 to 09/05/2022
Time of Monitoring	: 08:40 to 08:40 Hrs.
Ambient Temperature (°C)	: Min. 29°C, Max.43 °C
Surrounding Activity	: Human, Vehicular & Plant Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS-5182
Parameter Required	: As per Work Order

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	SOP No. VEL/SOP/01, Sec. No. SP 63: 2013	24.53	µg/m ³	60
2.	Particulate Matter (PM ₁₀)	IS: 5182 (P-23), 2006	55.84	µg/m ³	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	13.56	µg/m ³	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	6.82	µg/m ³	80
5.	Carbon Monoxide (as CO)	IS 5182 (P-10) Gas Chromatography, 1999, RA: 2014	0.25	mg/m ³	4

(Checked by)
ANJU INDOLIA
Sr. Analyst



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Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/AA/06 Report No.: VEL /A/2205110005/B
Name & Address of Party: M/s Mangalam Cement Ltd. Format No.: 7.B F-01
P.O. Aditya Nagar -Morak Kota Rajasthan Party Reference No.: NIL
Reporting Date: 16/05/2022
Period of Analysis: 11-16/05/2022
Receipt Date: 11/05/2022

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-

Sample collected by : Vardan EnviroLab Team
Sampling Location : Near Avalimeri Mahal Darrah Village
Instrument Used : VEL/Combo-42
Instrument Calibration Status : Calibrated
Latitude : 24°48'54"
Longitude : 75°59'6"
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 08/05/2022 to 09/05/2022
Time of Monitoring : 08:40 to 08:40 Hrs.
Ambient Temperature (°C) : Min. 29°C, Max.43 °C
Surrounding Activity : Human, Vehicular & Plant Activities
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS-5182
Parameter Required : As per Work Order

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Ammonia (as NH ₃)	SOP,SP-207, Issue No.01 and Based on CPCB Guidelines: 2018	*BDL(**DL 2.0)	µg/m ³	400
2.	Lead (as Pb)	IS: 5182 (P-22), Reaffirmed-2009	*BDL(**DL 0.02)	µg/m ³	1
3.	Benzene(as C ₆ H ₆)	IS: 5182 (P-11), 2004	*BDL(**DL 1.0)	µg/m ³	05
4.	Benzo(a)pyrene	IS: 5182 (P-12), 2004	*BDL(**DL 0.5)	ng/m ³	01
5.	Ozone (as O ₃)	IS: 5182 (P-9),1974: RA-2003	*BDL(**DL 4.0)	µg/m ³	180
6.	Arsenic(as As)	Methods of air sampling and analysis,3rd Ed.,1988,Method No. 302	*BDL(**DL 1.0)	ng/ m ³	6
7.	Nickel (as Ni)	USEPA compendium IO-3.2,1999: 1999	*BDL(**DL 5.0)	ng/ m ³	20

Note: BDL- *Below Detection Limit, ** DL- Detection Limit.

(Checked by)
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Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/AA/08
Name & Address of Party: M/s Mangalam Cement Ltd.
P.O. Aditya Nagar -Morak Kota Rajasthan

Report No.: VEL /A/2205110006/A
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 16/05/2022
Period of Analysis: 11-16/05/2022
Receipt Date: 11/05/2022

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-
Sample collected by : Vardan EnviroLab Team
Sampling Location : Near Darrah National Park Boundary Approach Road of
Kukara Kala Village
Instrument Used : VEL/RDS/FPS/28/23
Instrument Calibration Status : Calibrated
Latitude : 24°47'32"
Longitude : 75°59'23"
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 08/05/2022 to 09/05/2022
Time of Monitoring : 09:30 to 09:30 Hrs.
Ambient Temperature (°C) : Min. 29°C, Max. 43 °C
Surrounding Activity : Human, Vehicular & Plant Activities
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS-5182
Parameter Required : As per Work Order

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	SOP No. VEL/SOP/01, Sec. No. SP 63: 2013	34.83	µg/m ³	60
2.	Particulate Matter (PM ₁₀)	IS: 5182 (P-23), 2006	61.25	µg/m ³	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	16.44	µg/m ³	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	7.55	µg/m ³	80
5.	Carbon Monoxide (as CO)	IS 5182 (P-10) Gas Chromatography, 1999, RA: 2014	0.40	mg/m ³	4

(Checked by)
ANJU INDOLIA



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Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/AA/08 Report No.: VEL /A/2205110006/B
Name & Address of Party: M/s Mangalam Cement Ltd. Format No.: 7.8 F-01
P.O. Aditya Nagar -Morak Kota Rajasthan Party Reference No.: NIL
Reporting Date: 16/05/2022
Period of Analysis: 11-16/05/2022
Receipt Date: 11/05/2022

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-

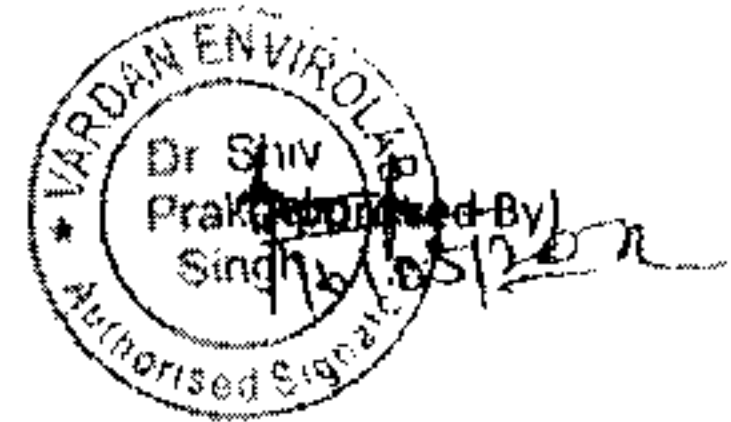
Sample collected by : Vardan EnviroLab Team
Sampling Location : Near Darrah National Park Boundary Approach Road of Kukara Kala Village
Instrument Used : VEL/RDS/FPS/28/23
Instrument Calibration Status : Calibrated
Latitude : 24°47'32"
Longitude : 75°59'23"
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 08/05/2022 to 09/05/2022
Time of Monitoring : 09:30 to 09:30 Hrs.
Ambient Temperature (°C) : Min. 29°C, Max. 43 °C
Surrounding Activity : Human, Vehicular & Plant Activities
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS-5182
Parameter Required : As per Work Order

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Ammonia (as NH ₃)	SOP,SP-207,Issue No.01 and Based on CPCB Guidelines: 2018	*BDL(**DL 2.0)	µg/m ³	400
2.	Lead (as Pb)	IS: 5182 (P-22), Reaffirmed-2009	*BDL(**DL 0.02)	µg/m ³	1
3.	Benzene(as C ₆ H ₆)	IS: 5182 (P-11), 2004	*BDL(**DL 1.0)	µg/m ³	05
4.	Benzo(a)pyrene	IS: 5182 (P-12), 2004	*BDL(**DL 0.5)	ng/m ³	01
5.	Ozone (as O ₃)	IS: 5182 (P-9),1974: RA-2003	*BDL(**DL 4.0)	µg/m ³	180
6.	Arsenic(as As)	Methods of air sampling and analysis,3rd Ed.,1988,Method No. 302	*BDL(**DL 1.0)	ng/ m ³	6
7.	Nickel (as Ni)	USEPA compendium IO-3.2,1999: 1999	*BDL(**DL 5.0)	ng/ m ³	20

Note: BDL- *Below Detection Limit, ** DL- Detection Limit.

(Checked By)
ANJU INDOLIA
Sr. Analyst



VEL/E/11/17/PH45033

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Analyzing for an Assured Future

TEST CERTIFICATE

Sample Number: NTL/LAB/06
 Name & Address of Party: M/s Mangalam Cement Ltd.
 P.O. Aditya Nagar - Morak Kota Rajasthan
 Report No.: AAQ-280922-06
 Party Reference No.: NKJ/6100034943
 Report Date: 03/10/2022
 Period of Analysis: 28/09/2022-03/10/2022
 Receipt Date: 28/09/2022

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-

Sample collected by : NTL Team
 Sampling Location : Near Avalimeri Mahal Darrah Village
 Instrument Calibration Status : Calibrated
 Latitude : 24°48'54"
 Longitude : 75°59'06"
 Meteorological condition during monitoring : Cloudy Sky
 Date of Monitoring : 23/09/2022 to 24/09/2022
 Time of Monitoring : 11:30 to 11:30 Hrs.
 Ambient Temperature (°C) : Min. 24°C, Max. 29 °C
 Surrounding Activity : Human, Vehicular & Plant Activities
 Scope of Monitoring : Regulatory Requirement
 Sampling & Analysis Protocol : IS-5182
 Parameter Required : As per Work Order

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	27.80	µg/m ³	60
2.	Particulate Matter (PM ₁₀)	IS: 5182 (P-23), 2006 RA: 2017	58.48	µg/m ³	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6) 2006 Sec.2, RA-2018	14.62	µg/m ³	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2) 2001 Sec. 2, RA-2018	8.32	µg/m ³	80
5.	Carbon Monoxide (as CO)	IS: 5182 (P-10) 1999	0.29	mg/m ³	4

Note:-

- The Result Listed refer only to the tested sample and applicable parameters
- Total Liability of our concern is limited to the invoiced amount
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Aljari
(Checked By)



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