

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

Dated 01.06.2017

**Six Monthly Compliance report of Environment Clearance for Mangrol Cement Plant Line-3****(For the Period from October 2016 to March 2017)****Reference Letter from MOEF, New Delhi - J-11015/267/2013-IA.II (I) Dated 08.09.2016**

| S. No. | Condition   | Status   |
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|        | <b>(A) Specific Conditions</b>  |  |
| (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>We have installed the continuous emission monitoring system (CEMS) &amp; Continuous ambient air monitoring system (CAAQMS) for our existing unit Line – 1 &amp; line 2 and real time data being send to CPCB &amp; RPCB regularly.</p> <p>The same will be installed in proposed project after commissioning of Line – 3.</p>   |
| (ii)   | The Standard issued by the Ministry vide G.S.R. No. 612 (E) dated 25 <sup>th</sup> August, 2014 and subsequent amendment dated 9 <sup>th</sup> May, 2016 and 10 <sup>th</sup> May, 2016 regarding cement plant with respect to particulate matter, SO <sub>2</sub> and Nox shall be followed.   | <p>Complied with. We are achieving the new emission standard with respect to PM, SO<sub>2</sub> &amp; as per G.S.R. no. 612 ( E) dated 25<sup>th</sup> August, 2014 &amp; subsequent amendment sated 9<sup>th</sup> may, 2016 and 10<sup>th</sup> May, 2016 for our existing plant Line – 1 &amp; 2. Monitoring report is enclosed as <b>Annexure – I</b>. For Nox we are in the process to take primary abatement method in process and installation of SNCR system.</p> <p>We will be complied the new emission standard after commissioning of proposed project Line – 3.</p> |
| (iii)  | Continuous stack monitoring facilities to monitor gaseous emissions from process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filter to coal mill and cement mill. Low Nox burner shall be provide to control Nox emissions. Regular calibration of the instruments must be ensured. | <p>We will be provide the continuous gaseous emission monitoring system for our proposed project Line – 3. All adequate Air Pollution Control equipment's shall be provided for particulate matter viz.</p> <ol style="list-style-type: none"><li>1) ESP - Clinker cooler</li><li>2) Bag house – Raw mill / Kiln</li><li>3) Bag house – Coal mill</li><li>4) Bag house – Cement mill</li></ol> <p>Low NOx burner will be provided for NOx emission control and regular calibration of the instruments will be complied after plant</p>   |

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|        |   | commissioning.   |
| (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.  | Will be complied by installation of energy efficient equipment.  |
| (v)    | The National Air Quality Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16 <sup>th</sup> November, 2009 shall be followed.  | We will be adhere to comply the National Air Quality Standards issued by the Ministry vide G.S.R. no. 826 (E) dated 16 <sup>th</sup> November, 2009.   |
| (vi)   | AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.  | We will be carried out the AAQ modelling based on the specific mitigative measures in the existing project and proposed for the expansion project to keep the emission well below prescribed standards.  |
| (vii)  | Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.  | We are in practice to conduct the fugitive emission monitoring regularly in our existing plant and controlled the emission by installing bag filters on material discharge point and water spraying in coal yard & other raw material yard. Guideline / Code of practice issued by the CPCB in this regard will be followed. |
| (viii) | A statement on carbon budgeting including the quantum of equivalent CO <sub>2</sub> 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 <sub>2</sub> that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared within a period of 6 Months and subsequently it should be prepared every year.                     | Will be complied after commission of proposed project.   |
| (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 | Will be complied with.   |

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|        | drinking water at site to prevent dehydration etc.  |  |
| (x)    | Arsenic and Mercury shall be monitored in emissions, ambient air and water.   | Will be complied, Arsenic and mercury monitoring in emissions, ambient air & water.  |
| (xi)   | The coal yard shall be lined and covered.   | Coal yard of existing plant Line – 1 & line – 2 are in covered shed. Proposed Line – 3 also will be covered after installation of plant.   |
| (xii)  | The project proponent shall prepare a report on impact of project on surrounding reserve forest within six months and will get it approved from the State Forest Department. A copy of the conservation with the State Forest and Wildlife Department. A copy of the same should be submitted to the Ministry and its Regional Office.  | There is no National park, Wildlife Sanctuary and forest area within 10 kms. of project area.  |
| (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.                | We are in practice to adopt wild fauna conservation i.e. Peacock conservation plan submitted for approval of with Chief wild life warden is enclosed as <b>Annexure – II</b> .   |
| (xiv)  | The project proponent will also provide the latest status of the environment compliances in respect of its existing plant.  | We are regular submitting the latest status of the environment compliances in respect of its existing plant by 1 <sup>st</sup> June & 1 <sup>st</sup> December of every calendar year.   |
| (xv)   | Efforts shall be made to reduce impact of the transport of the raw material and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.   | <p>All raw material transportation in covered dumper and end product being transporting in covered trucks or through rail mode fr existing plant. We have provided separate truck parking area in the existing plant Line 1 &amp; 2.</p> <p>The same practice will be adopted after commissioning of proposed project line – 3 and Vehicular emission will be regularly monitored during project activity.</p> |
| (xvi)  | Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated waste water shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process waste water shall be discharged outside the factory premises and ‘zero’ discharge shall be adopted. | We have air cooled condensers in our captive power plant and treated waste water from CPP is being reuse in coal yard for dust suppression and from WHR is being recycle in cement plant for machineries cooling purpose only. Our Cement plant based on dry process cement manufacturing technology based, hence there is no waste water discharge outside the factory premises and ‘Zero                     |

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|         |  | discharge' facility adopted.  |
| (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.  | We are strictly adhere to use of harvested rain water from our adjacent Limestone mines pit reservoir for cement plant. Remaining balance water requirement will be fulfil by ground water/ other sources only.   |
| (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>We are regular monitoring of Domestic effluent after treatment in STP, waste water from CPP &amp; WHR after neutralization in neutralization pit and treated waste water will be achieve the norms prescribed by the State Pollution Control Board. Analysis report is enclosed as <b>Annexure – III</b>.</p> <p>Same practice will be adopted in proposed line – 3 after commissioning of plant.</p>  |
| (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>All the dust i.e. raw mill dust, coal dust, clinker dust and cement dust from Pollution control equipment like Bag house / ESP are being recycled and reused in the cement manufacturing process in our existing Line – 1 &amp; 2. Hazardous waste i.e. Used Oil (5.1), Waste oil (5.2) and batteries are being sold out to authorized recyclers.</p> <p>The same practice will be adopted in proposed line – 3 after commission of plant.</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.  | We have arrangement for flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass etc.  |
| (xxi)   | The proponent shall examine and prepare a plan for utilization of high calorific waste such as chemical waste, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such waste and enter into an MOU for long-term utilization of such waste as per the Environment (protection) Rules, 1986 and with necessary approvals. | <p>We are having a various following hazardous waste / other waste permissions from CPCB / RSPCB to use as Alternative fuel &amp; raw materials (AFR) in our existing Mangrol Plant.</p> <ol style="list-style-type: none"> <li>1) Agro waste - 150 TPD</li> <li>2) Plastic waste – 100 TPM</li> <li>3) Carbon black – 4500 TPM</li> <li>4) Tyre chips – 50 TPD</li> <li>5) ETP waste from textile industries – 1200 TPA</li> <li>6) Lead zinc slag – 30,000 TPA</li> </ol> |

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|         |  | <p>7) Waste mix solid – 8000 TPM</p> <p>8) Waste mix liquid – 1500 TPM</p> <p>9) Pharmaceutical waste – Category 20.3 – 100TPA, 28.1 – 552.600 TPA, 28.3 – 10 TPA, 28.5 – 0.512 TPA and 28.6 – 750 TPA from Symbiotic Pharma, Indore (M.P.)</p>                    |
| (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 <b>MPPCB</b> .   | We are having a various hazardous waste / other waste permissions from CPCB / RSPCB to use as Alternative fuel & raw materials (AFR) in our existing Mangrol Plant as above and same will be adopted after commission of proposed project Line – 3.                |
| (xxiii) | Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.   | We will be develop the green belt over 33 % of the total project area with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. as per the consultation with local DFO, and as per the CPCB guideline. |
| (xxiv)  | The project proponent shall provide for solar light system for all common areas, street light, village and parking around project area and maintain the same regularly.  | We will be provide the solar light system for all common areas, street lights, village and parking around project area and maintain the same regularly.  |
| (xxv)   | The project proponent shall provide for LED light in their offices and residential areas.  | We have started process for replacement of light in the offices and residential areas.   |
| (xxvi)  | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.  | <p>We will be comply all recommendations made in the Charter on Corporate responsibility for Environment protection (CREP) for the Cement plants.</p> <p>Complying in our existing Unit 1 &amp; 2.</p>   |
| (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 | Agreed & will be complied with.  |

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|          | report in this regards shall be submitted to the Ministry's Regional Office.   |  |
| (xxviii) | In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company. | Agreed & will be complied with.  |
| (xxix)   | A risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office, SPCB and CPCB <b>within 3 months of issue of Environment Clearance letter.</b>  | <p>We are having the onsite emergency plan with respect to following objectives.</p> <ul style="list-style-type: none"> <li>• To overcome any emergency in its initial stage and to handle Disaster in most effective manner.</li> <li>• To eliminate any chance of loss to Human Life.</li> <li>• To minimise loss of Property in the Plant and surrounding areas.</li> <li>• To maintain essential supplies at the time of natural Calamities and / or Public disturbances.</li> </ul> <p>A copy of the onsite emergency plan for Mangrol Plant existing unit is enclosed as <b>Annexure – IV.</b></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.   | We will take provisions for all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. during the construction of proposed plant.   |
|          | <b>(B) GENERAL CONDITIONS</b>  |  |

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| (i)    | The Project authorities must strictly adhere to the stipulation made by the Rajasthan Pollution Control Board and the State Government.   | We are strictly adhere to stipulation made by RSPCB & State Government.   |
| (ii)   | No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEFCC).   | Agreed. We will take prior approval of the Ministry of Environment, Forest & Climate Change (MoEF& CC) for expansion or modification in the plant.  |
| (iii)  | At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> 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. | <p>We are already having the 4 ambient air monitoring stations in the downward direction for PM 10, PM 2.5, SO<sub>2</sub> &amp; NO<sub>x</sub> are anticipate in consultation with the State Pollution Control Board and monitoring data is being regular submitting to the Ministry and its regional office at Lucknow and the SPCB/CPCB once in six month for existing Mangrol plant Line – 1 &amp; Line 2.</p> <p>The same practice will be adopted in prosed Line – 3 after commissioning the plant.</p> |
| (iv)   | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.  | There is no waste water discharge in the cement plant hence 'Zero discharge' facility adopted and only from CPP & WHR waste water after treatment are recycle & reuse for dust suppression in coal yard and machineries cooling in the cement plant respectively.   |
| (v)    | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75dBA (daytime) and 70 dBA (night time).   | All necessary precaution has provided for control of noise pollution in the existing plant Line 1 & line 2.   |
| (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 on regular basis in the existing cement plant Line 1 & 2. The same practice will be adopted after commissioning of line – 3.  |
| (vii)  | The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.  | We have already developed 16 nos. of injection well and 1 recharge pond in the existing cement plant & colony.  |
| (viii) | The project proponent shall also comply with all the environment protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding   | We will be complied all the environment protection measures and safeguards recommended in the EIA/EMP report. We have undertaken socio – economic development under CSR activities  |

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|        | villages like community development programmes, education programmes, drinking water supply and health care etc.   | like community development programmes, education programmes, drinking water supply and health care etc.   |
| (ix)   | Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEFCC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Lucknow. The funds so provide shall not be diverted for any other purpose.  | We will be earmarked towards cost and recurring cost / annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate change (MoEF & CC) as well as the state govt. Implementation schedule will be submit to Regional office of the Ministry at Lucknow after commissioning of the Plant.  |
| (x)    | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestion/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.  | A copy of Environmental clearance letter has been sent to the SDM, Nimbhaera tehsil, The Sarpanch, Gram panchayat, Mangrol, DIC, Chittorgarh, Chief Executive offier Zila parishad, Chittorgarh The District Magistrate, Chitorgarh Local body on dated 19.09.2016 The clearance letter has uploaded on the website of the company i.e. <a href="http://www.jkcement.com">www.jkcement.com</a>  |
| (xi)   | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEFCC at Lucknow. The respective zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | Agreed & We are regular uploading the status of compliance of the stipulated environment clearance conditions, including result of monitoring data of the existing plant on the company website periodically. The same is regularly being sent to regional office Lucknow. The criteria pollutant level namely; PM 10, SO2, NOx (ambient levels as well as stack emissions) for existing plant Line 1 & 2 is being displayed at main gate of the company for the public domain. |
| (xii)  | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Lucknow/ CPCB/SPCB shall monitor the stipulated conditions.  | We are regular submitting the six monthly compliance report of the stipulated environment conditions including result of monitored data (both in hard copies as well as by email) for existing plant to the regional office of MoEF & CC and zonal office of CPCB and the SPCB.   |
| (xiii) | The environmental statement for each financial year ending 31 <sup>st</sup> 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  | We are regular submitting the Environment Statement report for each financial year ending 31 <sup>st</sup> March in the Form – V to the State Pollution Control Board and regional office of the MoEF & CC at Lucknow and uploading the same in the company website.  |



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|       | sent to the respective Regional Office of the MOEFCC at Lucknow by e-mail.  |  |
| (xiv) | The Project Proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of the Ministry of Environment, Forest and Climate Change (MoEFCC) at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspaper that are | <p>We have publish the notice that the project has been accorded environmental clearance by the Ministry of environment &amp; Forest in two newspaper namely as followed.</p> <ol style="list-style-type: none"> <li>1. Dainik Bhaskar dated 17.09.2016</li> <li>2. Rajasthan Patrika dated 17.09.2016</li> </ol> <p>The copy of newspaper cutting are enclosed as <b>Annexure - V</b></p> |
| (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.  | Agreed & 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.  | We will inform the Regional Office as well as 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.  |