**ANDHRA CEMENTS LIMITED**
**DURGA CEMENT WORKS**

**REGISTERD POST**

ACL/DCW/MOEF/2013-14/

Date: 02.12.2013

To
The Additional Director
MoEF-GOI, Regional Office (South Zone)
Kendrya Sadan,4th floor,E&F Wings
IInd Block, Koramangla
Bengaluru-560034
Karnataka

**Sub: Six monthly Environment Clearance Compliance report, granted by MoEF vide letter no.F.No.J-11011/719/2007-IA II (I) dated 20th December 2007.**

Dear Sir

With Reference to above, please find enclosed six monthly Environment Clearance compliance report of Durga Cement Works, a unit of Andhra Cements Limited for the period of April 2013 to September 2013 for your kind information and record please.

Thanking You

Yours faithfully
For DURGA CEMENT WORKS
A unit of Andhra Cement Limited

(Anjani Kumar)
Sr.GM (P&QC)

Enc: As above
Copy to

The Member secretary,
AP Pollution Control Board
Paryavaran Bhavan,A-III, IE, Sanath Nagar,
Hyderabad-500018

The Environment Engineer
Regional office, AP Pollution Control Board
102 Raghava Apartment, Brundavan garden
GUNTUR-522002,Andhra Pradesh

Shri A Monoharan
(Scientist D & Incharge)
Central Pollution Control Board, 1st & 2nd Floor,Nisarga Bhavan
A-Block,Thimmaiah Main Road,7th D Cross,Shivanagar opp.
Pushpanjali Theatre, Bangalure, Karnataka

JAYPEE GROUP

**ANDHRA CEMENTS LIMITED**
Regd. Office & Factory: Durga Cement Works, Durgapuram, Srinagar (P.O), Dachepalli - 522 414, Guntur Dt. Andhra Pradesh
Ph : +91-8649-257428-29, Fax : +91-8649-257449

# DURGA CEMENT WORKS

A Unit of Andhra Cements Limited
Gamalapadu(V),Dachepalli(M)
Guntur District,Andhra Pradesh.

**Six monthlyEnvironment clearancecompliance report for the periodApril-2013 to September-2013tothe condition specified in EC granted byMoEFVide letter no. J-11011/719/2007-IA II (I) dated 2012.2007.**

| Sl.No. | Condition | Compliance |
|---|---|---|
| **A.** | **Specific Conditions:** | |
| i. | Continuous monitoring system tomonitorgaseous emissions shall be provided and limit of SPM shall be controlled within 50 mg/$Nm^3$by installing adequate air pollution control system and data submitted to the Ministry's Regional Office at Bangalore, A.P. Pollution Control Board (APPCB) and CPCB regularly. | Continuous monitoring system tomonitorgaseous emissions through stacks has beencommissioned.Air pollution control equipmentslike RABH installedinKiln & Raw mill, Bag filter installed incoal mill, ESP installed in cooler. Bag filters installed incement mills. SPM level is maintained below 50 mg/$Nm^3$.Datais being submittedto Ministry's Regional Office at Bangalore, A.P. Pollution Control Board (APPCB) and CPCB regularly.Stack emission report is attached in**Annexure-A(i).**CEMC installed at**all**majar stacks exhibit**Annexure-A(ii)**Photographs of the APCDs are also attached as Exhibit in**Annexure-A(iii)** |
| ii. | The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. Crusher shall be operated with high efficiency bag filters. All conveyers shall be covered withGlsheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling. | Dust collection and extraction system (Bag filters) have beeninstalledtocontrol fugitive dust emissions at various transfer pointsi.eraw mill handling (unloading, conveying, transportingstacking) bagging and packing areas etc.Crusher has been provided with high efficiency bag filters. All conveyers are covered. Covered shedsare providedfor storage of raw materialsuch as lime stone,laterite, coal,gypsum.Cementandclinker are stored in silos. Fly ash silo is ready and pneumatic system isbeing installedfor fly ash handling. List of the APCDsare given in**Annexure-A(iv)**.Fugitive control measures Exhibit in**Annexure-A(v)** |
| iii. | Secondary fugitive emissions shall be controlled within the latest permissible limits issued by theMinistry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall | The secondary fugitive emission is being controlled as recommended andisbeingregularly monitored. Themonitoring data is beingsubmitted to APPCB, CPCB and MOEF regularly. |

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| | be followed and data submitted to the Ministry's Regional Office at Bangalore, CPCB and APPCB. | |
| iv | Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Bangalore. | Shall be complied. |
| v. | Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. Itshall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. | Regular water sprinkling is being carried out using water tankers at all pollution prone areas,conformingthe air quality norms asprescribed by the CPCB. Ambient Air Monitoring data are enclosed as per**Annexure-A(vi)** |
| iv. | Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded. | Beingcompliedby taking suitable measures for maintenance of Mine's vehicles.**Annexure-A(vii)**The vehicles are not overloaded and are covered with tarpaulin. |
| v. | Asphalting/concreting of roads and water spray all around the stockyard and loading /<br>Unloading areas in the cement plant shall be carried out to control fugitive emissions. | Beingcomplied.Photographs are attachedin**Annexure-A(viii).** |
| vi. | Total ground water requirement for cement plant and mining shall not exceed 420 and 60 $m^3$/day (including 56 $m^3$/day mine water) respectively. All the treated wastewater shall be recycled and reused in the process and/or for ash quenching, dust suppression, green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted. | Water consumption is maintained as per the APPCB limits.<br>No process wastewater aredischarged outside the factory premises and 'zero' discharge isadopted. |
| vii. | 'Permission' for the drawl of ground water from SGWB / CGWA shall be obtained. Mined out area shall be | Permissionfor the drawl of ground waterobtained. Copy of the letter isprovided at**Annexure-A (ix)**.Mined area developed as artificial |

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| | developed as artificial reservoir. The water stored in the artificial reservoir made in the mine pit shall be used maximum to reduce ground water consumption. | reservoirExhibit as per**annexure-A (x).**Use of water collected in artificial reservoir in the mine pitwillbe used to minimize ground water consumption. |
| viii. | Sewage treatment plant (STP) shall be installed for the colony. Treated domestic effluent shall beused for green belt development within the plant premises. Domestic waste from colony and STP shall be segregated into bio-degradable and non-biodegradable. Bio-degradable waste shall be composted and non-biodegradable waste shall be land filled at identified sites. ETP should also be provided for workshop and mineral separation plant wastewater. | STP is being installedby M/S Peacock Engineers Pvt. Ltd. Hyderabad.Progress in construction for STP is enclosed as**Annexure-A (xi)**. Sludge of STP will be used as manure and treated water for gardening. Bio-degradable and non bio-degradable waste will be treated as directed. |
| ix. | The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations. | Agreed, We ensure that no natural course of water obstructed due to any mining operation. |
| x. | All the bag filter dust, raw milldust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Sludge from domestic sources shall be used as manure for green belt development. Waste oil shall be sold to authorized recyclers / preprocessors only. | Systems are designed and installed for recycling and re-use of the dust collected by pollution control devices. Similarly sludge from domestic sources shall be used for green belt development. Waste oil shall be sold to authorized recyclers / pre-processors |
| xi. | An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. | Shall be complied |
| xii. | Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing. | Being complied, we are mixing low and high grade Limestone to conserve the natural resources.Flyashin PPC will be used when manufactured. |
| xiii. | Action plan for the mining, management of over burden (removal, storage, disposal etc.), reclamation of the mined out area and mine closure shall be submitted to the Ministry and its Regional Office at Bangalore. | There is no overburden in our mine, as Limestone is exposed on the surface.A copy of mining scheme approvalletter by IBM is enclosed as**Annexure- A (xii).** |
| xiv. | The top soil and solid waste shall be stacked separately at specified dumping site with proper safeguards. Top soil shall be used for the plantation / green belt development during | There is no top soil in our mine, as it is not applicable. |

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| | reclamation and solid waste for backfilling. | |
| xv. | The over burden (OB), inter burden and other waste generated from mines,*if* any, shall be stacked at the earmarked dump sites only and should not be kept active for long period. Backfilled OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of reclaimed areas shall continue until the vegetation becomes self-sustaining. Regular compliance shall be submitted to the Ministry and its Regional Office at Bangalore on six monthlybasis. | There is no overburden, inter burden and other waste generated in our mine.100% limestone being used for cement manufacturing. |
| xvi. | The area for external over burden dump shall be reduced by suitably increasing the height of the dumps with proper terracing. It shall be ensured that the overall slope of the dump does not exceed 28°. | Not applicable, as no over burden dumps need not to be generated. |
| xvii. | Garland drains shall be constructed to arrest silt and sediment flows from soil. The water so collected shall be used for watering the mine area, haul roads, green belt development etc. The drains shall be regularly de-silted and maintained properly. | Not applicable, since there is no wastes dump generated in our mine. |
| xviii. | Suitable rainwater harvesting and conservation measures to augment groundwater resources in the area on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board in cement plant and mining area to augment ground water resources and use for dust suppression and horticulture. | Rain water is being collected into Mine's pit for further use in the plant. |
| xix. | Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and newpeizometersat suitable locations by the project proponent in and around project area in consultation withRegional Director, Central Ground Water Board during the mining operation. The ground water monitoring | Water quality is regularly analyzed and abstract of the same is given at**Annexure-A(xiii).** |

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| | shall be carried out 4 times in a year i.e. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and data thus collected shall be regularly sent to the Ministry, its Regional Office at Bangalore, Central Ground Water Authority and State Ground Water Board, Bangalore. | |
| xx. | The project proponent shall take appropriatemitigativemeasures to prevent pollutions of nearby River and other surface water body, if any. | No waste water generated in our process/plant. Zero discharge is adopted. |
| xxi. | Deep hole wet drilling sequential blasting method shall be adopted and provision for the control air emissions during blasting using dust collectors/ extractors etc. shall be made. Blasting operation shall be carried out during the daytime only and one bench at a time shall be blasted. Themitigativemeasures for control of ground vibrations and to arrest fly rocks and boulders shall be implemented. 'No objection certificate' from the Chief Controller of Explosives shall be obtained. | Being complied.Wet drilling and sequential blasting methods applied.The charge per hole is also adjusted to minimize ground vibration and to control fly rocks. We are monitoring Ground vibration and air blast with the help of 'Minimate' instrument and keeping records of the same. The results are well within the permissible limits specified by DGMS. We have obtained no objection certificate from Chief controller of explosives, in form LE-3 for Explosive Possessionand Use. Enclosed copy ofLicenseNo.E/HQ/AP/22/93(E1673)as**Annexure –A(xiv)** |
| xxii. | Out of total 141.574ha.,green belt shall be developed in at least 36 ha. (25 %) in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO. In mining, out of 170.22ha.,plantation shall be raised in an area of 46.72 ha. By planting the native species around mining lease area, over burden dumps, around water body, roads etc. in consultation with the local DFO / Agriculture Department. At least, 1,500 trees per year shall be planted with a tree density of 2,000 trees per ha. An action plan shall be submitted in this regard. | An action plan for green belt development of Plant and Mines area is given at**Annexure –A (xv)**, photographs of tree plantation enclosed as per**annexure-A(xvi)** |
| xxiii. | The void left unfilled shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to | Our Mine is running mine, which will be converted into water body after completion of life. The maximum bench height is 8 m which is as per Mining plan approved by IBM. |

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| | stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area. | |
| xxiv. | The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional office within 3 months from the date of issue ofthis letter. | There is no endangeredflora &fauna around the mining area. |
| xxv. | A final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval. | Agreed.Shall be complied. |
| xxvi. | Mechanized open casting shall be adopted and no change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests. | Agreed. Mechanized open cast mining is adopted and wewill take prior approval ofMOEFfor any change in technology or scope. |
| xxvii. | Consent to Operate shall be obtained from APPCB before starting enhanced production from the mine. | Consent toOperatethemining operationfor enhanced production has been obtained.A copy of CFOenclosed as**Annexure-A (xvii)**We have already applied CFO renewal of our mines to APPCBHyderabad . |
| xxviii. | 'Permission' of the State Forest Department shall be obtained regarding impact of cement plant and mining activities on the surrounding 6 reserve forests viz.GamalapaduRF (0.1-0.4 km.),MadinapaduRF (1.2-1.8 km.),DaidaRF (4.7-4.9 km.),SaidulnamRF (3.8-5.0 km.).RavipahadRF (5.3-6.6 km.) andWarivabadRF (6.2-6.8 km) and all the recommendations shall be followed. | Shall be complied. |

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| xxix. | The company shall obtain necessary clearances / approval from the concerned Departments i.e. Indian Bureau of Mines, State Government,MoEFetc. for the linked mining component before undertaking any construction activityatthe project site. | Necessary permissions areobtained.Letter No.MS/AP/GNR/LST-189-SZ from IBMenclosed as**Annexure –A(xii)** |
| xxx. | Rehabilitation and Resettlement Plan for the project affected population as per the policy of the State Govt. shall be prepared and implemented. | There is no Rehabilitation and Resettlement involved in this Project. |
| xxxi. | Acoustic enclosures shall be provided to control noise wherever necessary. Mine machine shall be provided with silencers. Noise shall also be controlled from cooler fans, compressor house, cement mill and raw mill, cement plant and drilling machines, excavator, blasting at mine site using appropriate noise control measures. | All Mining machineries provided with silencers. Sharp bits are using withwet drilling to reduce noise ofdrilling machine. Drill operators are provided ear plug. Bottom initiation with the help of shock tubes and use of millisecond delay to reduce noise by blasting. Acoustic enclosures in the plant area are used where everapplicable. |
| xxxii. | All the safety norms stipulated by the Director General, Mine & Safety (DGMS) should be implemented. | We are implementing all the safety norms stipulated by DGMS |
| **B.** | **General Conditions :** | |
| i. | The project authority shall adhere to the stipulations made by Andhra Pradesh Pollution Control Board (APPCB) and State Government. | Agreed. |
| ii. | No further expansion or modification of the plant shall be carried out without prior approval of this Ministry. | Agreed. |
| iii. | The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by theA.P. Pollution Control Board. At no time, the particulate emissions from the cement plant shall exceed APPCB limit. Interlocking facility shall be provided in me*pollution control*equipment so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically. | Being complied. Stack emissions are with in the norms and inter locking facility also provided. |
| iv. | One ambient air quality monitoring station shall be installed in downwind direction. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of | Being complied. TwonosOn line real time CAAQM Station have been installed. & 4nosAAQM station installed at different locations & regular ambient air quality monitoring done. CAAQM stations & 4 No AAQM stations exhibit asper**Annexure-B (i).**Ambient air, Stack |

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| | ambient air quality and stack emissions shall be carried out regularly in consultation with APPCB and report submitted to the APPCB quarterly and to the Ministry's Regional Office at Bangalore half-yearly. | emission level Monitoring data are regularly submitted to APPCB, CPCB &MoEF. |
| v. | The company must harvest the rainwater from the rooftops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water. | All the water from the roof tops, storm water drains lead to main drains connecting to the mines water reservoir.Photographs of Rain water harvested at mine pit enclosed**Annexure-B(ii)** |
| vi. | The company shall undertake eco development measures including community welfare measures in the project area. | A list of eco development measures including community welfare measures in the projectarea is given at**Annexure B (iii).** |
| vii. | The overall noise levels in and around the plant area shall be kept well within the standards (85dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (Protection) Act, 1986Ruies, 1989 viz. 75dBA(day time) and 70dBA(night time). | Beingcomplied.Noise control measures including acoustic hoods, silencers. Enclosures have been provided. Noise level monitoring data enclosed as**Annexure –B(iv)** |
| viii. | All recommendations made in the Corporate Responsibility for Environment Protection (CREP) for cement plants shall be implemented. | A compliance report of CREP is given at**Annexure B (v)** |
| ix. | Proper housekeeping shall be taken up. Regular annual medical examination of all the employees shall be carried out from the occupational health point of view and records maintained. | Being Complied. Medical Reports enclosed as**Annexure- B(vi)** |
| x. | A separate environmental management cell to carry out various management and monitoringfunctions shall be set up under the control of Senior Executive. | An organization chart of the Environmental Management Cell isgiven at**Annexure B (vii).** |
| xi. | As proposed in EIA/EMP. Rs. 28.00Croresand Rs. 0.95Croresearmarked towards the capital cost and recurring cost/annum respectively for environment pollution control measures for the cement plant and Rs. 35.00Lakhsand Rs. 23.2Lakhsearmarked towards the capital cost and recurring cost/annum | As on date, about Rs.50.03croresalready invested on the air pollutionequipmentswhich were installed for expansion (ieRABH, ESP, Bag House and nuisance bag filters).Capital cost & Recurring cost data of Plant and Mines from April 2013 to September 2013 are attached as**Annexure-B(viii)**Funds providedfor the maintenance of the above equipment shallnot be diverted for any other purpose. |

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| | respectively for environment pollution control measures for the mine shall be suitably used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose. | |
| xii. | The Regional Office of this Ministry at Bangalore / CPCB / APPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical Interpretation shall be submitted to them regularly. | Agreed.Six monthly compliance reportsisregularly being submitted. |
| xiii. | The 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. | Complied. |
| 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 A. P. Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. This should 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 shall be forwarded to the Regional office at Bangalore. | Complied. |

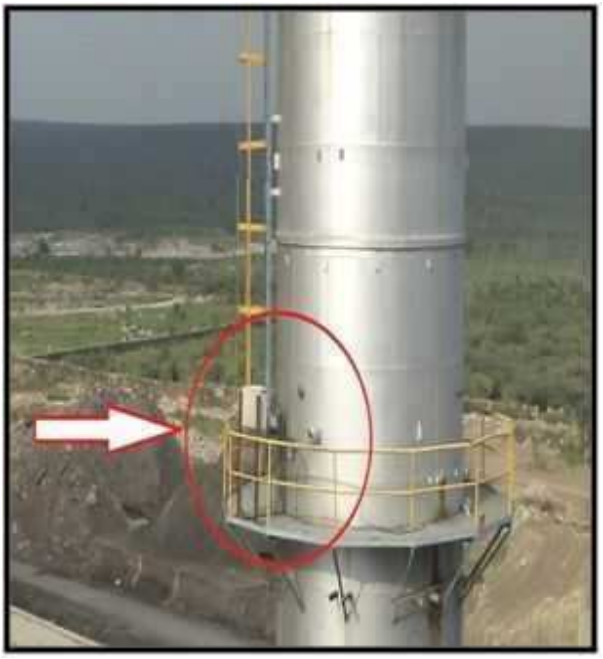
**ANNEXURE-A(i)**

## STACK MONITORING REPORT FROM APRIL 2013 TO SEPTEMBER 2013

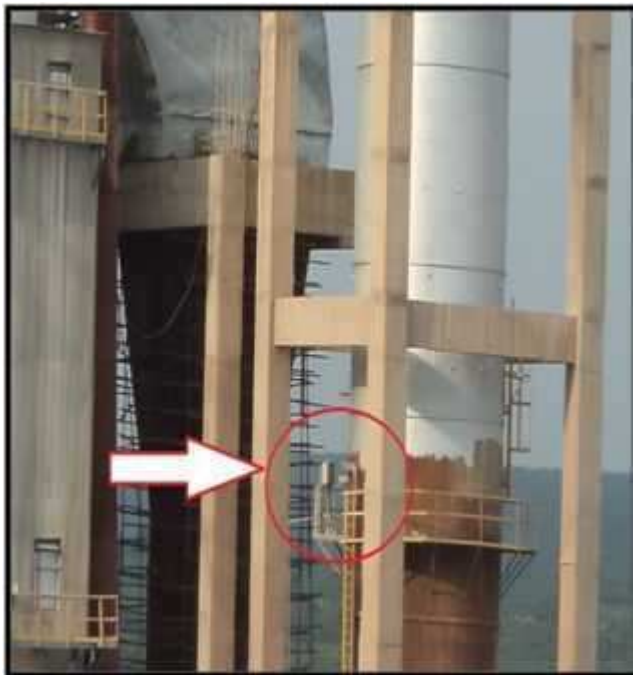
| | RABH STACK | COOLER STACK | COAL Mill STACK | CEMENT MILL-1 STACK | CEMENT Mill-2 STACK |
|---|---|---|---|---|---|
| | $mg/Nm^3$ | $mg/Nm^3$ | $mg/Nm^3$ | $mg/Nm^3$ | $mg/Nm^3$ |
| **Max.** | 42.00 | 47.30 | 32.23 | 29.21 | 37.00 |
| **Min.** | 21.60 | 18.50 | 2.60 | 18.89 | 17.32 |
| **Avg.** | 31.73 | 29.62 | 20.77 | 25.70 | 29.94 |
| **Std.Dev.** | 5.49 | 6.97 | 8.81 | 3.27 | 5.24 |
| **Coff.ofVariation.** | 0.17 | 0.24 | 0.42 | 0.13 | 0.18 |
| **98 percentile.** | 41.34 | 46.72 | 31.61 | 29.13 | 36.84 |

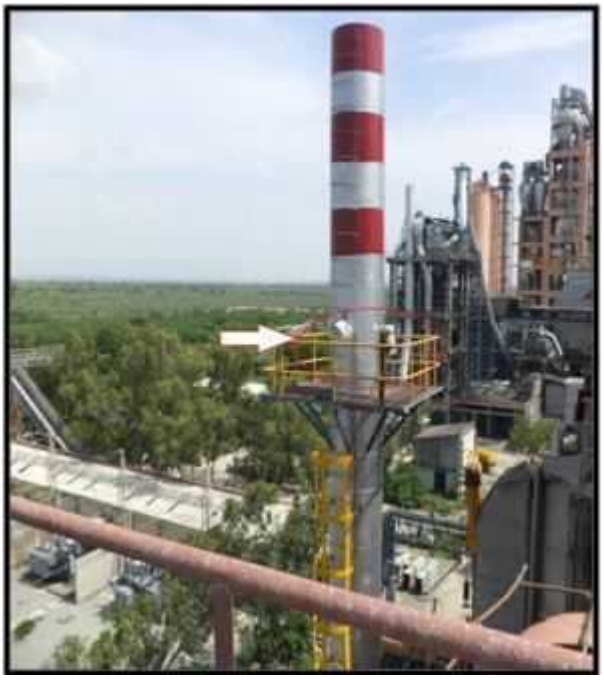
**Annexure-A (ii)**

## Continuous Emission monitoring system installed at all major stacks



Continuous Emission monitoring Analyzer on Cooler ESP Stack
Coal mill stack





Continuous Emission monitoring AnalyzerAnalyzeron the Cement Mill-2 Stack
Installed on RABH stack

**Continuous Emission monitoring system installed in all major stacks**

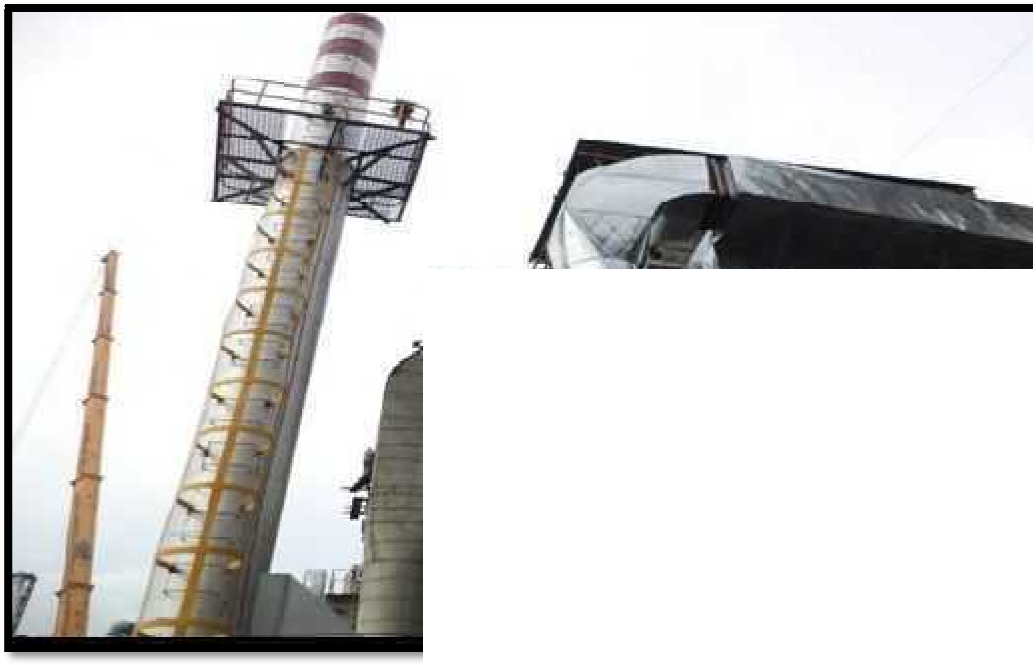
Continuous Emission monitoring Analyzer on Cement mill-1

## Annexure-A(iii)

# Air pollution control equipments

**Reverse Air Bag House (RABH) Installed in Kiln & Raw millsection**

**Cooler ESP**



**Cement Mill-2 Bag filter**

**Bag Filter Installed on Crusher Bag Filter Installed in kiln feed section**

ERROR: ioerror
OFFENDING COMMAND: image

STACK: