

CCCPL/DACHEPALLI/ENV/2020/22
Date: 30th May, 2020



**Additional Principal Chief Conservator of Forests (C)
Ministry of Environment, Forest and Climate Change
Regional Office (SEZ), 1st and 2nd Floor, Handloom Export Promotion Council,
Cathedral Garden Road, Nungambakkam,
Chennai- 34 (Tamilnadu)**

Sub: Submission Six Monthly Compliance Report for Environmental Clearance of 3.5 MTPA Cement Plant, 8 MW WHRB Power Plant and 2X50 MW Captive Power Plant of M/s Chettinad Cement Corporation Private Limited located at Pedagarlapadu & Kesanupalli (V), Dachepalli (M), Guntur District, Andhra Pradesh for the period of October 2019 to March 2020 - Reg.

Ref: Our EC F. No. J-11011/421/2011-IA.II(I) Dated 24th February 2015.

Dear Sir,

Reference with the Environmental Clearance cited above, we are herewith attached six monthly compliance report for the period of **October 2019 to March 2020** for 3.5 MTPA Cement Plant, 8 MW WHRB Power Plant and 2X50 MW Captive Power Plant of M/s Chettinad Cement Corporation Private Limited located at Pedagarlapadu & Kesanupalli (V), Dachepalli (M), Guntur District, Andhra Pradesh.

This is for your information & records please.

Thanking you,

Yours faithfully,
For **Chettinad Cement Corporation Private Limited,**

**K CHANDRASEKHAR
Vice President (Projects)**

Copy:

1. Regional Directorate, Central Pollution Control Board, A-Block, Nisarga Bhavan, 1st and 2nd Floors, 7th D Cross, Thimmaiah Road, Shivanagar, Bengaluru-560079 (Karnataka)
2. Environmental Engineer, Andhra Pradesh Pollution Control Board, Regional Office, D.No: 4-5-4/5C, 4/3 Navabharath Nagar, Ring Road GUNTUR – 522006 (Andhra Pradesh).

Encl: A/a



Chettinad Cement Corporation Private Limited

(Formerly Chettinad Cement Corporation Limited)

Pedagarlpadu & Kesanupalli (V),
Dachepalli (M), Guntur District, Andhra Pradesh – 522437

Environmental Clearance F. N. J-11011/421/2011-IA.II (I) Dated 24th February, 2015

Six Monthly Compliance Report - October 2019 to March 2020

Sl. No.	Condition	Compliance Status																					
SPECIFIC CONDITIONS:																							
i.	The expansion project shall comply with the new MOEF standards vide GSR 612 (E) dated 25.8.2014 with respect to particulate matter, SO ₂ , NO _x for Cement sector.	<ul style="list-style-type: none"> We have installed Air Pollution Control Devices (APCDs) are designed to achieve new emission standards vide GSR 612 (E) dated 25.8.2014. <table border="1"> <thead> <tr> <th>Equipment</th> <th>APCD</th> <th>Qty</th> </tr> </thead> <tbody> <tr> <td>Kiln & Raw Mill</td> <td>RABH</td> <td>1 Nos</td> </tr> <tr> <td>Coal Mill</td> <td>Bag House</td> <td>1 Nos</td> </tr> <tr> <td>Clinker Cooler</td> <td>ESP</td> <td>1 Nos</td> </tr> <tr> <td>Cement Mill</td> <td>Bag House</td> <td>1 Nos</td> </tr> <tr> <td>Crusher</td> <td>Bag Filter</td> <td>1 Nos</td> </tr> <tr> <td>Material Transfer Points</td> <td>Bag Filters</td> <td>85+ Nos</td> </tr> </tbody> </table> <ul style="list-style-type: none"> We have installed state of art PyroRedox Low NO_x Calciner technology at our pyro processing section to reduce the NO_x emissions below the prescribes standards. 	Equipment	APCD	Qty	Kiln & Raw Mill	RABH	1 Nos	Coal Mill	Bag House	1 Nos	Clinker Cooler	ESP	1 Nos	Cement Mill	Bag House	1 Nos	Crusher	Bag Filter	1 Nos	Material Transfer Points	Bag Filters	85+ Nos
Equipment	APCD	Qty																					
Kiln & Raw Mill	RABH	1 Nos																					
Coal Mill	Bag House	1 Nos																					
Clinker Cooler	ESP	1 Nos																					
Cement Mill	Bag House	1 Nos																					
Crusher	Bag Filter	1 Nos																					
Material Transfer Points	Bag Filters	85+ Nos																					
ii.	Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO _x burners shall be provided to control NO _x emissions. Regular calibration of the instruments must be ensured.	<ul style="list-style-type: none"> Continuous Emission Monitoring System (CEMS) is installed at Kiln & Raw Mill stack, Coal Mill stack, Clinker Cooler stack & Cement Mill stack. Photographs are attached as Annexure-1. Air pollution control system is installed at our plant is designed to achieve the prescribed emission standards. Low NO_x burner is installed to control NO_x emissions. Regular calibration of instruments will be ensured. 																					
iii.	All the pollution control devices/equipment in raw mill/kiln, kiln feeding system, clinker cooler, coal mill, cement mil, and cement silo, shall be interlocked so that in the event of the pollution control devices/systems not working, the respective unit(s) shutdown automatically.	Prescribed Interlocking system has been provided so that in the event of the pollution control devices/systems not working, the respective unit(s) shutdown automatically.																					
iv.	Proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be prepared and implemented as part of the integrated project.	20 MW Waste Heat Recovery Boiler Power Plant (WHRB) is under commissioning phase and we have applied for CFO on 09.03.2020 for WHRB along with Integrated cement plant.																					



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v.	The proponent shall provide an interlocking system to ensure that whenever the ESP is not in operation, the raw material feeder will automatically stop and restart only with the restart of ESP.	Interlocking system has been provided to ensure that whenever the ESP is not in operation, the raw material feeder will automatically stop and restart only with the restart of ESP.
vi.	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.	<ul style="list-style-type: none"> Fugitive emission control measures like closed raw material sheds, closed conveying system, Bagfilters at material transfer points, internal CC roads Photos of Fugitive emission control measures are shown in Annexure-2.
vii.	Arsenic and Mercury shall be monitored periodically in emissions, ambient air and water.	Direction is duly noted and will be followed once the operation activities commenced at our integrated cement plant.
viii.	The coal storage yard shall be lined and covered.	Closed storage shed has been planned to store coal. It is under construction.
ix.	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.	<ul style="list-style-type: none"> All raw material transport vehicles are reaching the plant premises with tarpaulin coverings. Flyash transported through closed container trucks (Bunker) only. Separate truck parking area with Cement Concrete is under construction. Vehicular emissions are monitored by regular pollution checks.
x.	Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 2000 m ³ /day to be sourced from the groundwater and River Krishna. Prior permission shall be obtained from the competent authority for water drawl. A five year water management plan shall be made so as to achieve reduction in ground water withdrawal.	Currently water requirement is met through Groundwater (Bore Wells) only and Permission for withdrawal of 1800 KLD ground water has been obtained from AP Groundwater department vide Lr. No. 298/T/SDP/GNT/2015-16 Dated 21.07.2015. Copy of permission letter attached as Annexure-3 .
xi.	Efforts shall be made to further reduce water consumption by using air cooler condensers. All the treated wastewater 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 wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.	<ul style="list-style-type: none"> No wastewater generation from Cement manufacturing process. Treated sewage water generated from STP is used for greenbelt development developed within the premises. Air cooled condensers are installed for WHRB power plant to reduce the water consumption.



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Sl. No.	Condition	Compliance Status
xii.	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.	<ul style="list-style-type: none">• Roof top rainwater harvesting system has been implemented in the colony area by providing percolation pits. System will be established before the monsoon period.• Rainwater harvesting tank is under construction.
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 the environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to be Ministry's Regional Office at Chennai, SPCB and CPCB.	<ul style="list-style-type: none">• Effluent water will not generate from cement manufacturing activity. Effluent water generated from WHRB will be treated to conforming prescribed standards during operation of the integrated plant.• Treated sewage water from STP and Ground water collected from nearby villages is being monitored. Monitoring results are attached as Annexure-4.
xiv.	All the bag filter dust, 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/reprocessors only	<ul style="list-style-type: none">• System is established to recycle and reuse the Bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices in the process.• Spent Oil & Used batteries will be sent to authorized recyclers/reprocessors only.
xv.	All the fly ash shall be utilized as per fly ash notification 1999 subsequently amended in 2003 and 2008. Efforts shall be made to use fly ash maximum in making Pozzolona Portland Cement (PPC). A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to regional office of the Ministry at Chennai. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.	<ul style="list-style-type: none">• System is established to utilize the fly ash to manufacturing of PPC grade cement.• Coal chemical composition of heavy metal and radio activity contents through reputed institute will be checked once after the operation of the integrated cement plant.
xvi.	Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.	Condition is duly noted and will be complied during operation phase of the plant.
xvii.	The proposed cement plant kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes such as oil sludge, cut tyres, etc.	Condition is duly noted. Multi fuel feeding will be provided to use of hazardous wastes such as oil sludge, cut tyres, etc.



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Sl. No.	Condition	Compliance Status
xviii.	The proponent shall examine and prepare a plan for utilization of high calorific wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such wastes and enter into an MOU for long-term utilization of such wastes as per the E (P) A Rules,1986 and with necessary approvals.	We will examine and prepare a plan for utilization of high calorific wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition once our plant comes under operation. We will identify suitable industries with such wastes and undergo MOU for long-term utilization of such wastes.
xix.	As proposed, 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, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	<ul style="list-style-type: none">• Greenbelt development activity has been started and being developed in phased manner with local/native plant species.• We have developed greenbelt all along the plant boundary, along the internal roads and in vacant places.• As on 31.03.2020, greenbelt developed in an area of 8.39 ha.• Photos showing greenbelt development is attached as Annexure-5.
xx.	All the recommendations made in the charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.	Condition is duly noted and will be complied during operation phase of our plant.
xxi.	All the commitments made to be public during the Public Hearing/Public consultation meeting held on 05.03.2014 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to be Ministry's Regional Office at Bangalore.	<ul style="list-style-type: none">• During Public hearing meeting held on 05.03.2014, most of the concerns raised for Job opportunities, environmental protection & infrastructure development in surrounding villages.• Job opportunities has been given to the nearby villagers, Advance Environmental protection measures are under implementation to prevent the surrounding areas from Pollution, Infrastructure development like Concrete approach road has been made to protect the agricultural land located along the road from fugitive emission and other developmental measures are being taken based on the need raised in the phased manner.



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Sl. No.	Condition	Compliance Status
xxii.	The proponent shall prepare a detailed CSR Plan for every 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 the local 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 provides 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 and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bangalore. The details of the CSR plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.	<ul style="list-style-type: none">• Presently our plant is under final commissioning stage and we have applied for Consent for Operation on 09.03.2020 and waiting for CFO order.• Detailed CSR plan was submitted along with EIA report (Chapte-8).• CSR/ESC plan will be restructured for next 5 years once plant comes under operation and same will be submitted to MOEFCC, RO, Chennai.
xxiii.	Risk Assessment and Disaster Management Plan with focus on Disaster Prevention and Safety shall be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.	Detailed risk assessment, emergency management & Disaster Management Plan is included in the EIA report which was submitted to the ministry. However it will be revised during the operation of plant and will be submitted.
xxiv.	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 structures to be removed after the completion of the project.	Provisions like Sheds with necessary facilities like sanitation, drinking water, electricity & health care facilities have been made for the construction labors.
GENERAL CONDITIONS:		
i.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Condition is duly noted. Prior approval will be obtained for any expansions & modifications.



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Sl. No.	Condition	Compliance Status
ii.	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 Bangalore and the SPCB/CPCB once in six months.	<ul style="list-style-type: none">Ambient air quality is being monitored for PM10, PM2.5, SO2 and NOx parameters at 4 locations in the plant boundary by engaging NABL approved third party laboratory. Monitoring results are attached as Annexure-6.Data on ambient air quality and stack emission Monitoring are being submitted to MOEFCC RO, CPCB & APPCB along with six monthly compliance reports.
iii.	Industrial wastewater shall be properly collected, treated so as to conform to be standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	<ul style="list-style-type: none">No wastewater generation is envisaged from Cement manufacturing activity.Effluent water generated from WHRB will be treated to conforming prescribed standards during operation of the integrated plant. The treated wastewater will be utilized for dust suppression & road wetting activities.
iv.	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 (day time) and 70dBA (night time).	<ul style="list-style-type: none">Source noise control measures are implemented by providing acoustic hoods, silencers, enclosures to high noise generating equipments.Ambient noise levels are being monitored at plant boundary & nearby villages and source noise levels monitored at Cement Grinding area are attached as Annexure-7.
v.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Condition is duly noted & will be complied. Since the project is under at final stage of commissioning, pre-employment health checkup of the employees is being carried out. During operation phase periodical medical checkups will be conducted and report same will be maintained.
vi.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Roof top rainwater harvesting system has been planned in the colony area by providing percolation pits. System will be established before the monsoon period. Rainwater harvesting tank is under construction.



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Sl. No.	Condition	Compliance Status
vii.	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 socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<ul style="list-style-type: none">All the environmental protection measures and safeguards recommended in the EIA/EMP report are being compliedUndertaking socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc under CSR programme. Spend an amount of Rs. 12.6 Lakhs towards CSR so far.
viii.	Requisite amount 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 and Forests 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 Bangalore. The funds so provided shall not be diverted for any other purpose.	<ul style="list-style-type: none">Required capital fund has been allocated to implement the conditions stipulated by MoEF & CC as well as APPCB.Currently Baghouses, Bagfilters and fugitive emission control measures has been taken to implement the conditions.The funds so allocated will not be diverted for any other purpose.
ix.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParishad/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.	Condition is complied.
x.	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 MOEF at Bangalore. The respective Zonal Office of CPCB and SPCB. The criteria pollutant levels namely; PM10, PM2.5, 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.	<ul style="list-style-type: none">Status of compliance of the stipulated environment clearance conditions are being submitted on six monthly to RO of the MOEF at Chennai, ZO of CPCB at Bangalore and APPCB at Vijayawada.Copies of compliance reports along with monitoring reports are displayed in our company website at below link: https://www.chettinad.com/cements_plants.php?site=DachepalliReal time board for display of critical parameters at main gate was installed.(attach photo)



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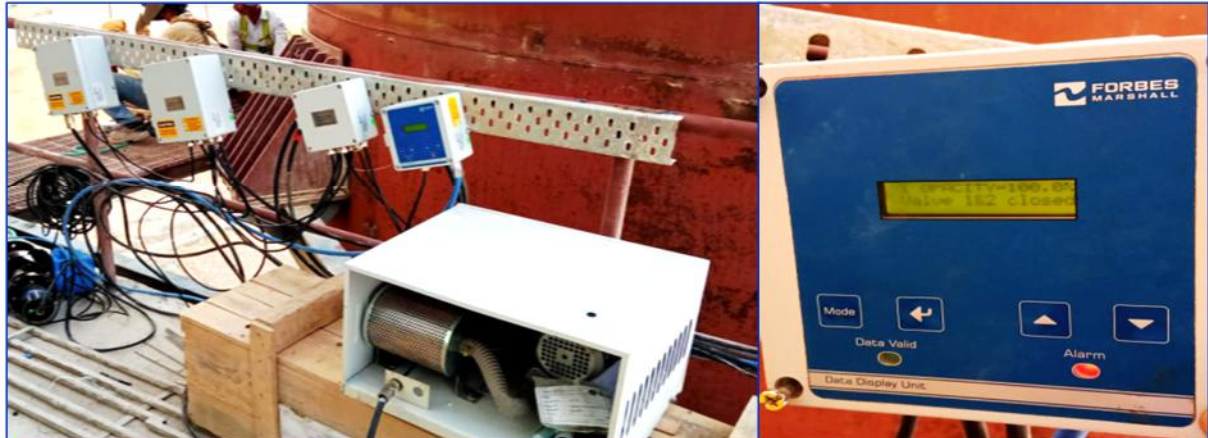
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Sl. No.	Condition	Compliance Status
xi.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bangalore/CPCB/SPCB shall monitor the stipulated conditions.	Compliance of the stipulated environmental conditions and results of monitored data are being submitted to RO of the MOEF at Chennai, ZO of CPCB at Bangalore and APPCB at Vijayawada on every six months.
xii.	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 be 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 MOEF at Bangalore by e-mail.	Environmental Statement (Form-V) for the financial year 2018-19 has been submitted on 23.09.2019 to APPCB & RO of the MOEF at Chennai (by e-mail).
xiii.	The Project proponent shall inform the public that the project has been accorded environmental clearance of 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 and Forests 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 Bangalore.	<ul style="list-style-type: none">• Advertisement given in the local newspaper (Telugu and English) are given in the Annexure-8.<ul style="list-style-type: none">➤ English – The Hindu dt.06.03.2015.➤ Telugu – Enadu (Guntur edition) dt 06.03.2015.
xiv.	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.	<ul style="list-style-type: none">• Project Land development was commenced from Nov' 2016 after obtaining Consent For Establishment order from APPCB.• We will inform the date of commencement of operation of integrated plant to RO of Chennai located at Chennai once obtaining the CFO from APPCB.

ANNEXURE-1

Continuous Emission Monitoring System (CEMS)



PM & Gaseous CEMS for Kiln & Raw Mill RABH Stack



PM CEMS for Coal Mill Bag House Stack



PM CEMS for Clinker Cooler ESP Stack

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PM CEMS for Cement Mill Bag House Stack

ANNEXURE-2

Fugitive Emissions Control Measures



Bag Filter for Crusher



Bag Filter at Clinker Silo top



Closed Conveyor Belts



Bag Filter at Flyash Silo top



Closed sheds for Raw Materials



Closed Conveyor Belts for Limestone



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ANNEXURE-3

1800 KLD Ground Water Withdrawal Permission

GOVERNMENT OF ANDHRA PRADESH GROUND WATER DEPARTMENT

From:

Sri M. Rama Prasad, M.Sc.,
Deputy Director,
Ground Water Department,
¼ Ramannapet, G U N T U R,
Phone No. 0863-2230767
Fax No. 0863-2250930

To:

M/s. Chettinad Cement Corporation Limited,
Pedagarlapadu (V),
Dachepally(M),
Guntur District.

Lr.No. 298/T/SDP/GNT/2015-16/

Dated: 21.07.2015

Sir,

Sub:- Ground Water Department, Guntur – Single Window – Furnishing the Approved report of M/s. Chettinad Cement Corporation Limited, Pedagarlapadu (V) of Dachepally (M) in Guntur District – Regarding.

Ref:- Head Office Memo No. 1218/Hg-II/2015, Dated:- 20.07.2015.

With reference to the subject and reference cited above, I am herewith furnishing the ground water investigation report of M/s. Chettinad Cement Corporation Limited, Pedagarlapadu (V) of Dachepally (M) in Guntur District is **approved** by the Director, Ground Water Department, Hyderabad. The firm is permitted to draw 1800 kld from 20 newly recommended Bore wells at V₁, V₂, V₃, V₄, V₆, V₇, V₈, V₉, V₁₀, V₁₄, V₁₅, V₁₆, V₁₇, V₁₈, V₁₉, V₂₀, V₂₁, V₂₄, V₂₅ and V₂₆ @ 10 hours of pumping in a day.

Encls: 1) Report Copy

Yours Faithfully,

M. Ramesh
DEPUTY DIRECTOR. 21/7/15

Copy submitted to the Director, Ground Water Department, Hyderabad for favour of information.

Copy submitted to the Commissioner of Industries, Government of Andhra Pradesh, Chirag Ali lane, Hyderabad for favour of information.

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ANNEXURE-4
Sewage Treated Water Characteristics

Sl. No.	Parameter	Standards	Oct-Dec'19	Jan-Mar'20
1	pH @ 25°C	6.5-9.0	7.36	7.46
2	Total Suspended Solids (TSS)	<100 mg/L	8	6
3	Oil and Grease	--	BDL	BDL
4	Biochemical Oxygen Demand (BOD) at 27°C for 3 days	30 mg/L	14	17
5	Chemical Oxygen Demand (COD)	100 mg/L	56	73
6	Fecal coliforms	<1000 MPN/100mL	30	23

Ground Water Quality (Requirement Limits as per IS 10500-2012)
Post Monsoon Season

Sl. No.	Parameter Name	UoM	Loc-1	Loc-2	Loc-3	Loc-4	Loc-5	Loc-6
MICROBIOLOGICAL ANALYSIS								
1	Total coliforms	MPN	Absent	Absent	Absent	Absent	Absent	Absent
ORGANOLEPTIC AND PHYSICAL PARAMETERS								
2	Colour	Hazen	<0.1	2	2	2	2	5
3	Odour	--	Agree	Agree	Agree	Agree	Agree	Agree
4	Turbidity	NTU	<0.1	8.7	4.5	1.5	<0.1	4.9
5	pH @ 25°C	--	7.79	7.04	7.13	8.3	7.01	7.56
6	Taste	--	Agree	Agree	Agree	Agree	Agree	Agree
7	Total Dissolved Solids @180°C	mg/L	1094	654	922	178	1132	745
GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS								
8	Boron as B	mg/L	0.204	0.072	0.172	0.003	0.161	0.069
9	Calcium Hardness (as CaCO ₃)	mg/L	240	270	230	60	320	240
10	Chloride as Cl	mg/L	38	105	145	24.5	234.9	125
11	Copper as Cu	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	
12	Fluoride as F	mg/L	0.65	0.45	0.53	0.24	0.48	0.41
13	Iron as Fe	mg/L		0.3	0.18	0.3	0.12	0.19
14	Magnesium Hardness (as CaCO ₃)	mg/L	120	100	70	34	110	70
15	Manganese as Mn	mg/L	0.003	0.004	0.012	0.002	0.011	0.003
16	Nitrate as NO ₃	mg/L	9.5	8.0	5.6	3.5	14.1	5.7
17	Selenium as Se	mg/L	0.002	BLQ	0.002	BLQ	0.002	BLQ
18	Sulphate as SO ₄	mg/L	360	155	80	37.6	228.7	85
19	Total Hardness as CaCO ₃	mg/L	360	370	300	94	430	310
20	Total Alkalinity as CaCO ₃	mg/L	243	217	314	85.3	368.6	330
21	Anionic Surface Active Agent as MBAS	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
22	Sodium as Na	mg/L	12.8	10.1	20.4	30.1	27.4	21.3
23	Conductivity @ 25°C	µS/cm	1887	1128	1591	330	2100	1284
PARAMETERS CONCERNING TOXIC SUBSTANCES								
24	Cadmium as Cd	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ



Chettinad Cement Corporation Private Limited

(Formerly Chettinad Cement Corporation Limited)

Pedagarlpadu & Kesanupalli (V),
Dachepalli (M), Guntur District, Andhra Pradesh – 522437

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Sl. No.	Parameter Name	UoM	Loc-1	Loc-2	Loc-3	Loc-4	Loc-5	Loc-6
25	Cyanide as CN	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
26	Lead as Pb	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
27	Mercury as Hg	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
28	Total Arsenic as As	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
29	Total Chromium as Cr	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
30	Pesticide Residues	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ

Loc-1: Mine Site, Loc-2: Plant Site, Loc-3: Takkellapadu, Loc-4: Veerapuram, Loc-5: Pedagarlpadu, BLQ-Below the Limit of Quantitation, BDL-Below the Detectable Limit, AB - Absent

Ground Water Quality (Requirement Limits as per IS 10500-2012) Winter Season

Sl. No.	Parameter Name	UoM	Loc-1	Loc-2	Loc-3	Loc-4	Loc-5	Loc-6
MICROBIOLOGICAL ANALYSIS								
1	Total coliforms	MPN	17	Absent	11	Absent	22	Absent
ORGANOLEPTIC AND PHYSICAL PARAMETERS								
2	Colour	Hazen	<1	5	2	2	<1	2
3	Odour	--	Agree	Agree	Agree	Agree	Agree	Agree
4	Turbidity	NTU	0.4	5.2	4.9	1.9	0.4	4.5
5	pH @ 25°C	--	7.09	7.87	7.13	8.13	7.24	7.32
6	Taste	--	Agree	Agree	Agree	Agree	Agree	Agree
7	Total Dissolved Solids @180°C	mg/L	1005	774	985	194	1035	666
GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS								
8	Boron as B	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
9	Calcium Hardness (as CaCO ₃)	mg/L	321	260	250	66	245	281
10	Chloride as Cl	mg/L	248	135	150	26	47	119
11	Copper as Cu	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
12	Fluoride as F	mg/L	0.5	0.5	0.6	0.3	0.7	0.5
13	Iron as Fe	mg/L	0.14	0.2	0.17	2.17	BDL	0.28
14	Magnesium Hardness (as CaCO ₃)	mg/L	133	82	71	36	128	87
15	Manganese as Mn	mg/L	BLQ	0.004	BLQ	BLQ	BLQ	BLQ
16	Nitrate as NO ₃	mg/L	16.0	6.2	5.9	3.28	10	11.2
17	Selenium as Se	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
18	Sulphate as SO ₄	mg/L	215	86	77.7	36	357	149
19	Total Hardness as CaCO ₃	mg/L	454	342	321	102	372	367
20	Total Alkalinity as CaCO ₃	mg/L	378	359	330	87	252	369
21	Anionic Surface Active Agent as MBAS	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
22	Sodium as Na	mg/L	30.1	23	23	32	15	14
23	Conductivity @ 25°C	µS/cm	1845	1367	1632	313	1886	1243
PARAMETERS CONCERNING TOXIC SUBSTANCES								
24	Cadmium as Cd	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
25	Cyanide as CN	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
26	Lead as Pb	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
27	Mercury as Hg	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
28	Total Arsenic as As	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
29	Total Chromium as Cr	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
30	Pesticide Residues	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ

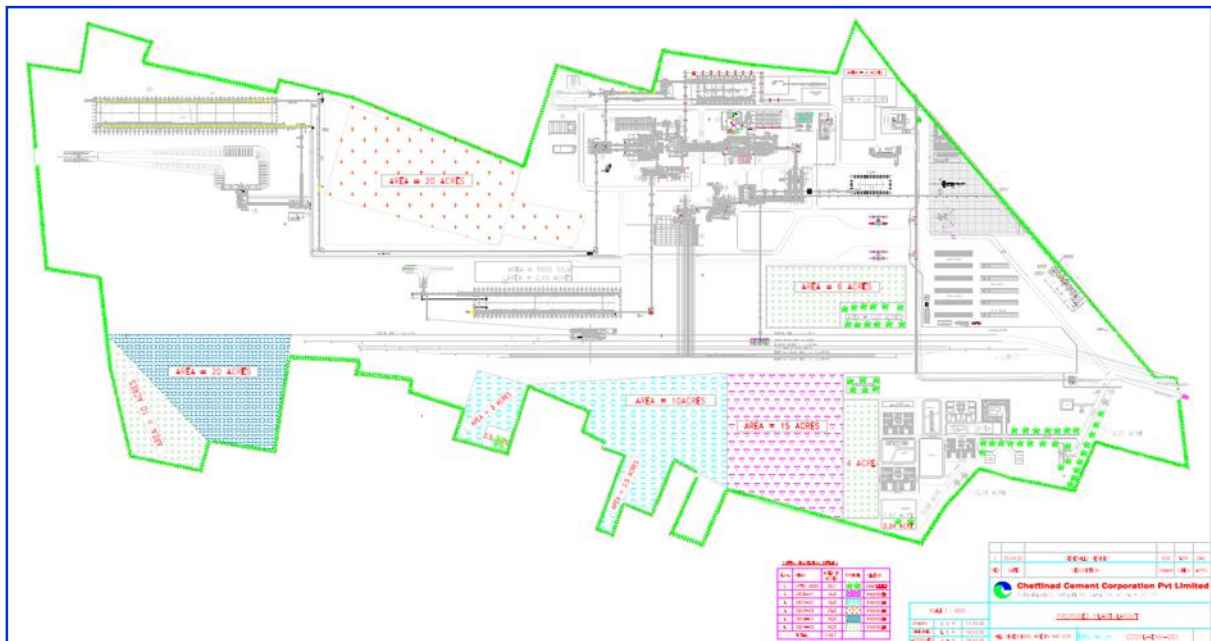
Loc-1: Mine Site, Loc-2: Plant Site, Loc-3: Takkellapadu, Loc-4: Veerapuram, Loc-5: Pedagarlpadu, BLQ-Below the Limit of Quantitation, BDL-Below the Detectable Limit, AB - Absent

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**ANNEXURE-5
Greenbelt Development**

Year of Plantation	No's Saplings Planted	Area in Ha	Survival Rate (%)
2017-18	4500	4.05	96%
2018-19	2800	2.52	96%
2019-20	3411	1.82	100%
Total	10711	8.40	



Plant Layout Showing Existing & Proposed Greenbelt Details



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Greenbelt developed along the industry boundary

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ANNEXURE-6
Ambient Air Quality Monitoring Data
PM 10 (in $\mu\text{g}/\text{m}^3$)

Sl. No.	Parameter	Standards	Oct-Dec'19	Jan-Mar'20
1	Near Main Gate	100 $\mu\text{g}/\text{m}^3$	44.9	49.0
2	Near CAAQMS Upwind		46.0	46.6
3	Near CAAQMS Downwind		65.4	52.6
4	North West Corner		44.9	50.4

PM 2.5 (in $\mu\text{g}/\text{m}^3$)

Sl. No.	Parameter	Standards	Oct-Dec'19	Jan-Mar'20
1	Near Main Gate	60 $\mu\text{g}/\text{m}^3$	14.1	16.5
2	Near CAAQMS Upwind		20.7	18.5
3	Near CAAQMS Downwind		16.6	20.3
4	North West Corner		14.1	19.5

SO₂ (in $\mu\text{g}/\text{m}^3$)

Sl. No.	Parameter	Standards	Oct-Dec'19	Jan-Mar'20
1	Near Main Gate	80 $\mu\text{g}/\text{m}^3$	11.9	8.2
2	Near CAAQMS Upwind		10.6	10.0
3	Near CAAQMS Downwind		12.4	9.1
4	North West Corner		9.5	7.8

NO_x (in $\mu\text{g}/\text{m}^3$)

Sl. No.	Parameter	Standards	Oct-Dec'19	Jan-Mar'20
1	Near Main Gate	80 $\mu\text{g}/\text{m}^3$	15.6	13.8
2	Near CAAQMS Upwind		13.1	14.9
3	Near CAAQMS Downwind		16.6	13.6
4	North West Corner		12.1	14.1



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ANNEXURE-7

Ambient Noise Monitoring Data

Sl. No.	Parameter	Oct-Dec'19		Jan-Mar'20	
		Day	Night	Day	Night
	<i>Standards</i>	<i>75 dB (A)</i>	<i>70 dB (A)</i>	<i>75 dB (A)</i>	<i>70 dB (A)</i>
1	CCCPL Colony	58.2	54.1	56.9	51.8
	<i>Standards</i>	<i>55 dB (A)</i>	<i>45 dB (A)</i>	<i>55 dB (A)</i>	<i>45 dB (A)</i>
3	Pedagarlapadu	49.3	42.1	47.6	44.8
4	Takkellapadu	53.1	40.1	50.8	44.3
5	Veerapuram	54.8	44.9	51.3	42.4

Work Zone Noise Monitoring Data

Sl. No.	Parameter	Standards	Oct-Dec'19 Noise Levels dB(A)	Jan-Mar'20 Noise Levels dB(A)
1	Cement Mill Area	<i>85 DB (A)</i>	67.4	68.3
2	Cement Mill Compressor Area		66.4	64.9
3	Central Control Room		69.3	68.8
Monitored 3 Meter away from Source				

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ANNEXURE-8

EC accorded advertisement in News Papers

Chettinad Cement Corporation Limited

PUBLIC NOTICE

This is to inform the public that the **Ministry of Environment, Forest and Climate Change** has accorded **Environmental Clearance (EC)** for our proposed Integrated Cement Plant with a capacity of 3.5 million tons of cement per annum along with power generation of 8 MW using Waste Heat Recovery Boiler and Captive Power Plant with a capacity of 2 x 50 MW at Pedagarlpadu and Kesanupalli Villages, Dachepalli Mandal, Guntur District, Andhra Pradesh under Environment Impact Assessment (EIA) Notification 2006 vide its Letter F.N.J-11011/421/2011-IA.II(I) dated 24-02-2015, The copy of the EC Letter is available at Andhra Pradesh Pollution Control Board and website of Ministry of Environment, Forest and Climate Change.

Sd/- Chief Operating Officer
Chettinad Cement Corporation Limited

Date: 04-03-2015

THE HINDU ON 06-03-15 PAGE 3

చెట్టినాడ్ సిమెంట్ కార్పొరేషన్ లిమిటెడ్

ప్రకటన

సాధారణ ప్రజాసీకానికి తెలియజేయునదేమనగా 24-02-2015 తేదినాటి లెటర్ ఎఫ్.ఎన్.జె-11011/421/2011-IA.II(I) ప్రకారం ఎన్విరాన్మెంట్ ఇంపాక్ట్ అసెస్మెంట్ (ఇఐఎ) నోటిఫికేషన్ 2006 క్రింద ఆంధ్రప్రదేశ్, గుంటూరు జిల్లా, దాచేపల్లి మండలం, పెదగార్లపాడు మరియు కేసానుపల్లి గ్రామాలవద్ద సంవత్సరానికి 3.5 మిలియన్ టన్నుల సిమెంట్ సామర్థ్యంతో మా ప్రతిపాదిత సిమెంటు ప్లాంట్, వేస్ట్ హీట్ రికవరీ బాయిలర్ వినియోగిస్తూ 8 MW పవర్ జనరేషన్ మరియు 2x50 MW సామర్థ్యంతో కాస్ట్ పవర్ ప్లాంట్ కొరకు పర్యావరణ, అటవీ మరియు వాతావరణ మార్పుల మంత్రిత్వశాఖచే ఎన్విరాన్మెంట్ల్ క్లియరెన్స్ (ఇసి) మంజూరు చేయబడినది. ఇసి లెటర్ యొక్క కాపీ ఆంధ్రప్రదేశ్ కాలుష్య నియంత్రణ మండలి వద్ద మరియు పర్యావరణ, అటవీ మరియు వాతావరణ మార్పుల మంత్రిత్వశాఖ యొక్క వెబ్ సైట్ లో లభించును.

సం/- చీఫ్ ఆపరేటింగ్ ఆఫీసర్
చెట్టినాడ్ సిమెంట్ కార్పొరేషన్ లిమిటెడ్

తేది: 04-03-2015

ఈ నాడు, గుంటూరు జిల్లా, డాచిపల్లి, 15 పేజీ