

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

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
Pedagarlpadu & Kesanupalli (V), Dachepalli (M), Guntur District, Andhra
Pradesh for the period of April 2021 to September 2021 - Reg.

Ref: 1. F. No. J-11011/421/2011-IA.II(I) Dated 24th February, 2015 (EC).
2. F. No. J-11011/421/2011-IA.II(I) Dated 27th October, 2020 (Name Change).

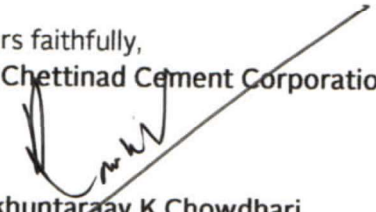
Dear Sir,

Reference with the Environmental Clearance cited above, we are herewith attached
six monthly compliance report for the period of **April 2021 to September 2021** 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 Pedagarlpadu &
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,


Vaikhuntarav K Chowdhari
Joint President (Works)

IR Perinetti

Copy:

1. Inspector General of Forests, Integrated Regional Office, Vijayawada Green House
Complex, Vijayawada – 520010, Andhra Pradesh.
2. Regional Directorate, Central Pollution Control Board, A-Block, Nisarga Bhavan,
1st and 2nd Floors, 7th D Cross, Thimmaiah Road, Shivanagar, Bengaluru-560079
(Karnataka)
3. 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)

Pedagarlapadu & 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 –April 2021 to September 2021

Sl. No.	Condition	Compliance Status																								
<u>SPECIFIC CONDITIONS:</u>																										
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 and we are complying with the standards. <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>LS P.Crusher</td><td>Bag Filter</td><td>1 Nos</td></tr> <tr> <td>LS S.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>	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	LS P.Crusher	Bag Filter	1 Nos	LS S.Crusher	Bag Filter	1 Nos	Material Transfer Points	Bag Filters	85+ Nos
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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"> We have installed state of art Pyro Redox Low NO_x Calciner technology at our pyro processing section to reduce the NO_x emissions below the prescribed standards. 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 is being ensured. 																								
iii.	All the pollution control devices/equipment in raw mill/kiln, kiln feeding system, clinker cooler, coal mill, cement mill, 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.																								



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Sl. No.	Condition	Compliance Status
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.	<ul style="list-style-type: none">We are having 20 MW waste heat recovery Boiler power plant and obtained Consent for Operation Order on 03.07.2020 along with cement plant.As part of WHR system, we have installed PH boiler at Preheater and AQC boiler at Clinker Cooler to capture the waste heat gases. Further, these gases will move to the turbine and generates 20 MW electricity from waste gases.
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, Bag filters at material transfer points, internal CC roads & Water sprinkling on roads are in place.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.	<ul style="list-style-type: none">Our captive power plant establishment activities are yet to be commenced. Once the CPP comes under operation, we will monitor the Arsenic and Mercury in the emissions.However, we have been monitoring Arsenic and Mercury concentration periodically in ambient air and water & reports of the same are being maintained.
viii.	The coal storage yard shall be lined and covered.	Closed storage shed for coal under final stage of construction. Roof sheeting work is going on. Photographs of the same are attached as Annexure-3 .

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Sl. No.	Condition	Compliance Status
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. Fly ash transported through closed container trucks (Bunker) only. Separate truck parking area with Cement Concrete is established. 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-4 .
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.
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 planned in the colony area by providing percolation pits. System will be established shortly. 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 process. Effluent water generated from WHRB will be treated to conforming prescribed standards during operation of the WHRBPP. Treated sewage water from STP and Ground water collected from nearby villages is being monitored. Monitoring results are attached as Annexure-5.



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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 to 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.	Captive Thermal Power Plant project activities are not yet commenced. Once, CPP comes under operation we will analyze the chemical composition of the coal with respect to heavy metals & radioactive elements.
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.
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.
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.



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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 30.11.2021, greenbelt developed in an area of 20.84 ha.Photos showing greenbelt development is attached as Annexure-6.We have already started land development works for greenbelt development in 60 acre. Works is under progress.
xx.	All the recommendations made in the charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.	CREP guidelines are being complied. Compliance status of the same is attached as Annexure -7 .
xxi.	All the commitments made to the 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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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"> Detailed CSR plan was submitted along with EIA report (Chapte-8). We have been carried out CSR activities with focus on Health, Education, sanitation and infrastructure development in nearby villages. We ensure that 2% of the profit amount is spent for CSR activities.
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 are included in the EIA report which was submitted to the ministry.
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 at plant boundary by engaging NABL approved third party laboratory. Monitoring results are attached as Annexure-8. 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 WHRBPP. 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 equipment. Ambient noise levels are being monitored at plant boundary & nearby villages and source noise levels are attached as Annexure-8.
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. Pre-employment health checkup of the employees is being carried out.
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 shortly. Rainwater harvesting tank is under construction.



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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 complied Undertaking socioeconomic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc. under CSR program. We ensure that 2% of the profit amount is spent for CSR activities.
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& recurring fund has been allocated to implement the conditions stipulated by MoEF & CC as well as APPCB. All the Bag Houses & Bag Filters were installed for dust controlling. Coal Storage shed is under construction. Storage shed for limestone, Gypsum & Additives was completed. Greenbelt is being developed in phased manner. The funds so allocated will not be diverted for any other purpose. An amount of Rs. 2.56 Cr incurred towards revenue expenditure on environment pollution control & protection measures for the period of Apr-21 to Sept-21.
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.



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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 MOEFCC 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=Dachepalli• Real time board for display of critical parameters at main gate was installed. Display Board Photograph attached as Annexure-9.
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 MOEFCC at Chennai, ZO of CPCB at Bangalore and RO of APPCB at Guntur on every six months.
xii.	The environmental statement for each financial year ending 31st 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 email	Environmental Statement (Form-V) for the financial year 2020-21 has been submitted on 24.09.2021 to APPCB & RO of the MOEF at Chennai (by e-mail).



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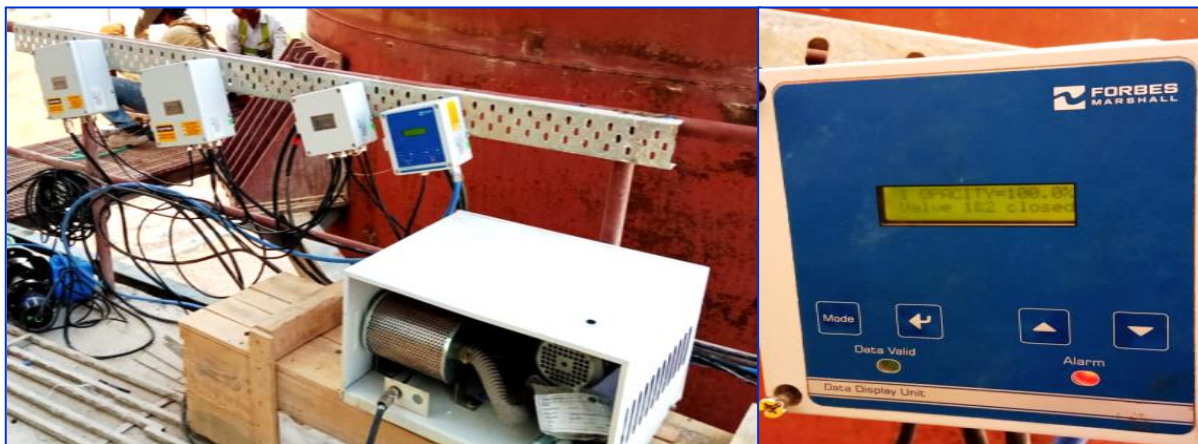
Sl. No.	Condition	Compliance Status
xiii.	The Project proponent shall inform the public that the project has been accorded environmental clearance of the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests 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.	EC accorded Advertisement given in the local newspaper (Telugu and English) which are presented in the Annexure-10 . ➤ 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.• Consent for Operation was obtained from AP Pollution Control Board for 3.5 MTPA Cement & 20 MW WHRB on 03.07.2020.

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ANNEXURE-1

Continuous Emission Monitoring System (CEMS)



PM & Gaseous CEMS for Kiln & Raw Mill RABH Stack



PM CEMS for Coal Mill Bag House Stack



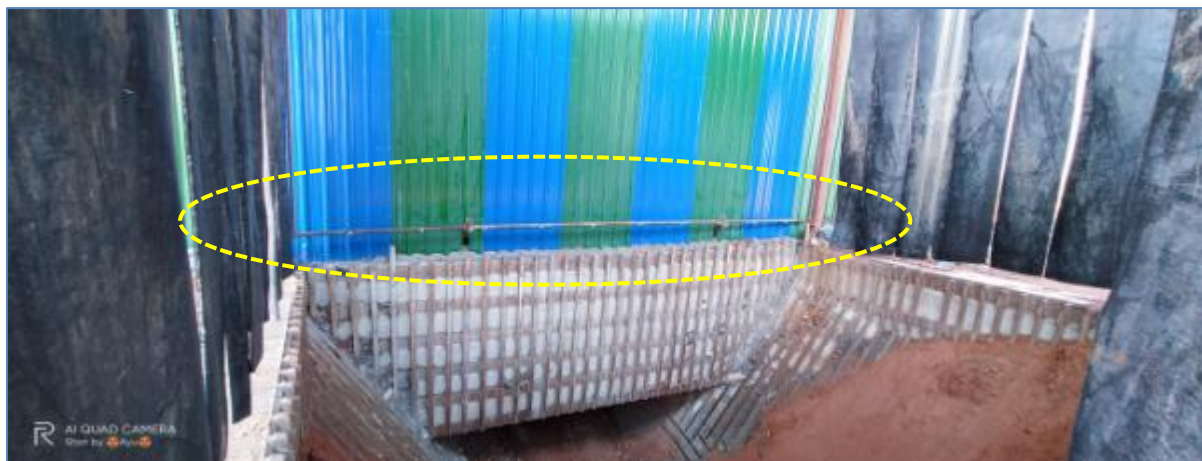
PM CEMS for Clinker Cooler ESP Stack

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PM CEMS for Cement Mill Bag House Stack

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Bag Filter at Limestone Secondary crusher and closed crusher building



Closed limestone conveying system circuit



Closed Gypsum Storage Shed

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Gypsum storage shed & Closed conveying system



Closed Limestone Storage Shed



Closed Additive Storage Shed

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Closed Coal Conveying System



Bag Filters at Fly ash silo Top



Bag Filters at Blending silo Top

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Water spraying through tankers on internal roads



Water spraying mechanical sprinklers on internal roads



Road sweeping machine



Internal CC roads

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Construction of Coal Storage Shed under progress

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Environmental Clearance F. N. J-11011/421/2011-IA.II (I) Dated 24th February, 2015**Six Monthly Compliance Report –April 2021 to September 2021****ANNEXURE-4****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,

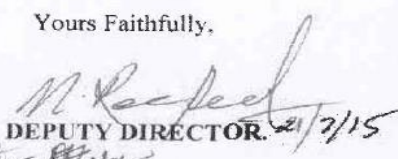
Sub:- Ground Water Department, Guntur – Single Window – Furnishing the
Approved report of M/s. Chettinad Cement Corporation Limited,
Pedagarlapadu (V) of Dachepally (M) in Guntur District – Regarding.

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,


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.

Environmental Clearance F. N. J-11011/421/2011-IA.II (I) Dated 24th February, 2015
Six Monthly Compliance Report –April 2021 to September 2021
ANNEXURE-5
Sewage Treated Water Characteristics

Sl. No.	Parameter	Standards	June'21	July'21	Aug'21	Sept'21
1	pH @ 25°C	6.5-9.0	7.61	6.72	9.0	8.8
2	Total Suspended Solids (TSS)	<100 mg/L	14.0	12.0	11.90	12.40
3	Oil and Grease	--	BDL	BDL	BDL	BDL
4	Biochemical Oxygen Demand (BOD) at 27°C for 3 days	30 mg/L	12.0	10.0	9.0	10.10
5	Chemical Oxygen Demand (COD)	100 mg/L	56.0	48.0	50.0	54.0
6	Fecal coliforms	<1000 MPN/100 mL	290	170	500	110

Ground Water Quality (Requirement Limits as per IS 10500-2012)
Pre Monsoon Season (Apr-June'21)

Sl. No.	Parameter Name	UoM	Loc-1	Loc-2	Loc-3	Loc-4	Loc-5	Loc-6
MICROBIOLOGICAL ANALYSIS								
1	Total coliforms	MPN	<2	<2	<2	<2	<2	<2
ORGANOLEPTIC AND PHYSICAL PARAMETERS								
2	Colour	Hazen	<1	<1	2	5	2	2
3	Odour	--	Agree	Agree	Agree	Agree	Agree	Agree
4	Turbidity	NTU	1.2	0.21	0.1	0.1	1.8	0.8
5	pH @ 25°C	--	6.64	7.18	7.73	7.4	6.72	7.16
6	Taste	--	Agree	Agree	Agree	Agree	Agree	Agree
7	Total Dissolved Solids @180°C	mg/L	842	1612	1672	1492	1842	1670
GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS								
8	Boron as B	mg/L	0.102	0.214	0.18	0.081	0.212	0.246
9	Calcium Hardness (as CaCO ₃)	mg/L	160	310	412	412	248	342
10	Chloride as Cl	mg/L	112	412	294	452	612	560
11	Copper as Cu	mg/L	BLQ	0.004	0.004	0.008	BLQ	BLQ
12	Fluoride as F	mg/L	0.21	0.12	0.31	0.18	0.38	0.34
13	Iron as Fe	mg/L	0.08	0.19	0.07	BDL	BDL	BDL
14	Magnesium Hardness (as CaCO ₃)	mg/L	68	180	96	142	172	208

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Sl. No.	Parameter Name	UoM	Loc-1	Loc-2	Loc-3	Loc-4	Loc-5	Loc-6
15	Manganese as Mn	mg/L	BLQ	0.018	0.005	0.014	0.024	0.021
16	Nitrate as NO ₃	mg/L	10.2	40	22	20	32	36
17	Selenium as Se	mg/L	BLQ	0.005	BLQ	0.008	BLQ	BLQ
18	Sulphate as SO ₄	mg/L	174	121	142	182	310	182
19	Total Hardness as CaCO ₃	mg/L	228	490	532	554	420	550
20	Total Alkalinity as CaCO ₃	mg/L	232	532	514	352	432	524
21	Anionic SurfaceActive Agent as MBAS	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
22	Sodium as Na	mg/L	68	262	142	240	318	232
23	Conductivity @ 25°C	µS/cm	1424	2642	2942	2580	3112	2824
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: Pedagarlapadu,
Loc-6: Kachavaram, BLQ-Below the Limit of Quantitation, BDL-Below the Detectable Limit, AB - Absent

Ground Water Quality (Requirement Limits as per IS 10500-2012)
Monsoon Season (July-Sep'21)

Sl. No.	Parameter Name	UoM	Loc-1	Loc-2	Loc-3	Loc-4	Loc-5	Loc-6
MICROBIOLOGICAL ANALYSIS								
1	Total coliforms	MPN	<2	<2	<2	<2	<2	<2
ORGANOLEPTIC AND PHYSICAL PARAMETERS								
2	Colour	Hazen	<1	<1	<1	5	2	5
3	Odour	--	Agree	Agree	Agree	Agree	Agree	Agree
4	Turbidity	NTU	0.2	4.2	0.4	2.6	4.4	0.4
5	pH @ 25°C	--	7.61	8.12	7.12	7.4	8.08	7.4
6	Taste	--	Agree	Agree	Agree	Agree	Agree	Agree
7	Total Dissolved Solids @180°C	mg/L	1092	1432	758	712	192	1680
GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS								
8	Boron as B	mg/L	0.122	0.241	0.214	0.17	0.241	0.041
9	Calcium Hardness (as CaCO ₃)	mg/L	242	560	212	280	62	246
10	Chloride as Cl	mg/L	218	440	218	164	38	280
11	Copper as Cu	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
12	Fluoride as F	mg/L	0.42	0.53	0.44	0.62	0.14	0.32
13	Iron as Fe	mg/L	BDL	BDL	0.13	0.13	BDL	BDL
14	Magnesium Hardness (as CaCO ₃)	mg/L	108	318	146	112	22	168
15	Manganese as Mn	mg/L	BLQ	0.047	0.024	0.012	0.018	0.009
16	Nitrate as NO ₃	mg/L	6.8	32.2	45	18	22	28

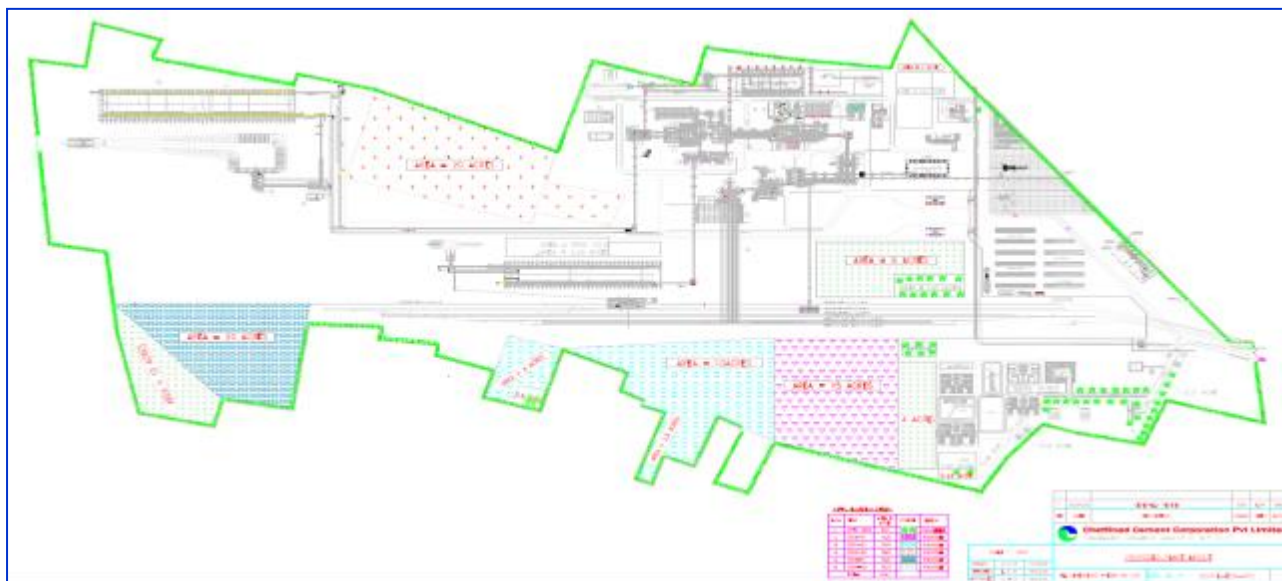
Environmental Clearance F. N. J-11011/421/2011-IA.II (I) Dated 24th February, 2015
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Sl. No.	Parameter Name	UoM	Loc-1	Loc-2	Loc-3	Loc-4	Loc-5	Loc-6
17	Selenium as Se	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
18	Sulphate as SO ₄	mg/L	310	330	172	79	32	162
19	Total Hardness as CaCO ₃	mg/L	350	578	358	392	84	414
20	Total Alkalinity as CaCO ₃	mg/L	282	310	320	210	70	450
21	Anionic SurfaceActive Agent as MBAS	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
22	Sodium as Na	mg/L	22	68	38	32	31	118
23	Conductivity @ 25°C	µS/cm	2080	2560	1446	1184	336	2840
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,
Loc-6: Kachavaram, BLQ-Below the Limit of Quantitation, BDL-Below the Detectable Limit, AB - Absent

Environmental Clearance F. N. J-11011/421/2011-IA.II (I) Dated 24th February, 2015
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ANNEXURE-6
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	98%
2020-21	2705	2.43	98%
2021-22	11365	10.02	96%
Total	24781	20.84	

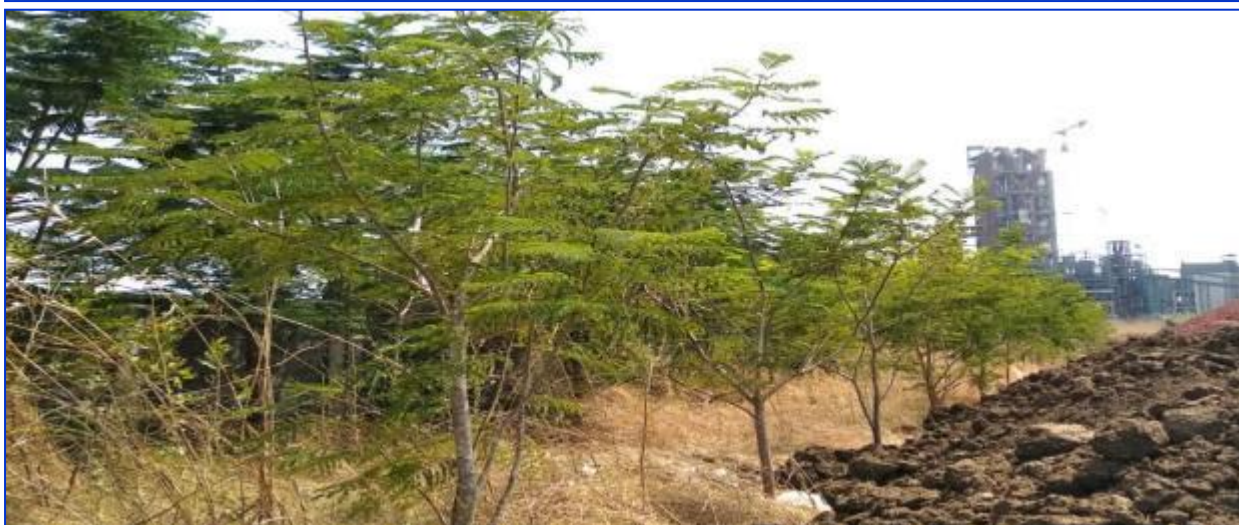


Plant Layout Showing Existing & Proposed Greenbelt Details



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Existing Greenbelt

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Greenbelt developed in 2021-22

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60 acre greenbelt development work is under progress

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Main gate to Old OHC compound wall - Before



Plantation at B-type front side



Plantation at STP front side compound wall

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ANNEXURE-7
**Charter on corporate responsibility for Environmental protection (CREP)
(Cement Industry)**

Sl. No.	Description of Condition	Status of Compliance
I.	Cement Plants, which are not complying with notified standards, shall do the following to meet the standards. <ul style="list-style-type: none"> Augmentation of existing Air Pollution Control Devices - by July 2003. Replacement of existing Air Pollution Control Devices - by July 2004. 	We have installed Air Pollution Control Devices (APCDs) are designed to achieve new emission standards vide GSR 612 (E) dated 25.8.2014 and we are complying with the standards.
II.	Cement Plants located in critically polluted or urban areas (including 5 km distance outside urban boundary) will meet 100 mg/ Nm ³ limit or particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm ³ .	We are complying with Particulate Matter emission standards of 30 mg/Nm ³ .
III.	The new cement kilns to be accorded NOC/Environmental Clearance w.e.f 01.04.2003 will meet the limit of 50 mg/Nm ³ for particulate matter emissions.	We are complying with Particulate Matter emission standards of 30 mg/Nm ³ .
IV.	CPCB will evolve load-based standards by December 2003.	Noted.
V.	CPCB and NCBM will evolve SO ₂ and NO _x emission standards by June 2004.	Noted.
VI.	The Cement industries will control fugitive emissions from all the raw material and products storage and transfer points by December 2003. However, the feasibility for the control of fugitive emissions from limestone and coal storage areas will be decided by the National Task Force (NTF). The NTF shall submit its recommendations within three months.	Fugitive emissions are controlled by establishing closed raw material sheds, closed conveying system; Bag filters at material transfer points, internal CC roads & Water sprinkling on roads.
VII.	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum cokes as fuel in cement kiln by July 2003.	Noted.
VIII.	After performance evaluation of various types of continuous monitoring equipment and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/ sections for installation of continuous monitoring equipment. The industry will install the continuous monitoring systems (CMS) by December 2003	Continuous Emission Monitoring System (CEMS) is installed at our Kiln & Raw Mill stack, Coal Mill stack, Clinker Cooler stack & Cement Mill stack and connected to APPCB & CPCB websites.
IX.	Tripping in kiln ESP to be minimized by July 2003 as per the recommendations of NTF.	This condition may not applicable to us as we are having Reverse Air Bag House for Kiln as APCD.



Chettinad Cement Corporation Private Limited

(Formerly Chettinad Cement Corporation Limited)

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

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

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		No trappings were observed at Clinker Cooler ESP.
X.	Industries will submit the target date to enhance the utilization of waste material by April, 2003.	As we have started operations at our plant from July 2020, we will utilize waste material for co-processing once the plant gets stabilized.
XI.	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003.	Noted.
XII.	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003. *Noncomplying units shall give bank guarantee to respective SPCB's.	We are having 20 MW Waste Heat Recovery Boiler Power Plant.

Environmental Clearance F. N. J-11011/421/2011-IA.II (I) Dated 24th February, 2015
Six Monthly Compliance Report –April 2021 to September 2021
ANNEXURE-8
Ambient Air Quality Monitoring Data
Particulate Matter Less than 10 Microns (PM 10) - $\mu\text{g}/\text{m}^3$

Sl. No.	AAQ Location	June'21	July'21	Aug'21	Sept'21
1	Near Main Gate	60.1	54.2	53.1	50.3
2	Near CAAQMS Upwind	60.3	50.7	49.3	52.1
3	Near CAAQMS Downwind	50.3	55.3	60.3	54.3
4	North West Corner	49.5	53.8	57.2	60.4
NAAQMS:2009 Standards:		100 $\mu\text{g}/\text{m}^3$			

Particulate Matter Less than 2.5 Microns (PM 2.5) - $\mu\text{g}/\text{m}^3$

Sl. No.	AAQ Location	June'21	July'21	Aug'21	Sept'21
1	Near Main Gate	28.3	23.8	18.0	21.8
2	Near CAAQMS Upwind	20.6	18.3	20.1	22.4
3	Near CAAQMS Downwind	18.7	21.7	22.7	22.1
4	North West Corner	19.8	23.1	23.0	21.8
NAAQMS:2009 Standards:		60 $\mu\text{g}/\text{m}^3$			

Sulphur Dioxide (SO₂) - $\mu\text{g}/\text{m}^3$

Sl. No.	AAQ Location	June'21	July'21	Aug'21	Sept'21
1	Near Main Gate	11.6	12.1	8.2	9.4
2	Near CAAQMS Upwind	9.3	10.1	9.5	10.3
3	Near CAAQMS Downwind	9.6	13.6	9.5	11.4
4	North West Corner	10.1	13.1	11.2	12.1
NAAQMS:2009 Standards:		80 $\mu\text{g}/\text{m}^3$			

Nitrogen Dioxide (NO₂) - $\mu\text{g}/\text{m}^3$

Sl. No.	AAQ Location	June'21	July'21	Aug'21	Sept'21
1	Near Main Gate	18.2	17.3	10.0	11.8
2	Near CAAQMS Upwind	14.5	12.3	11.7	12.8
3	Near CAAQMS Downwind	12.9	17.8	11.7	14.8
4	North West Corner	15.8	18.3	13.8	14.3
NAAQMS:2009 Standards:		80 $\mu\text{g}/\text{m}^3$			

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

Sl. No.	Parameter	June'21		July'21		Aug'21	
		Day	Night	Day	Night	Day	Night
	<i>Standards</i>	75 dB(A)	70 dB(A)	75 dB(A)	70 dB(A)	75 dB(A)	70 dB(A)
1	CCCPL Colony	64.5	57.8	69.8	62.1	66.3	58.4
	<i>Standards</i>	55 dB(A)	45 dB(A)	55 dB(A)	45 dB(A)	55 dB(A)	45 dB(A)
2	Pedagarlapadu Village	50.8	40.2	52.1	41.5	53.2	41.1
3	Takkellapadu Village	51.7	42.6	53.4	43.7	50.6	40.4
4	Veerapuram Village	53.9	43.8	50.8	40.6	52.7	43.2
5	Budawada Village	54.2	41.6	50.1	43.4	51.4	42.2
6	Kachavaram Village	50.6	43.1	51.4	41.3	52.4	43.6
7	Gadawaripalle Village	52.1	42.8	53.8	42.1	53.7	42.4
8	Tummala Chervu Village	53.4	42.5	51.3	40.6	51.3	43.1

Sl. No.	Parameter	Sept'21	
		Day	Night
	<i>Standards</i>	75 dB(A)	70 dB(A)
1	CCCPL Colony	70.2	54.6
	<i>Standards</i>	55 dB(A)	45 dB(A)
2	Pedagarlapadu Village	52.1	42.3
3	Takkellapadu Village	51.8	41.7
4	Veerapuram Village	53.6	40.4
5	Budawada Village	52.4	40.8
6	Kachavaram Village	50.1	41.3
7	Gadawaripalle Village	51.9	42.1
8	Tummala Chervu Village	52.6	43.8

Work Zone Noise Monitoring Data

Sl. No.	Parameter	Standards	April-June'21 Noise Levels dB(A)	July-Sept'21 Noise Levels dB(A)
1	Cement Mill Area	85 DB (A)	79.6	78.2
2	Cement Mill Compressor Area		81.9	82.7
3	Central Control Room		76.2	80.3
4	Kiln Area		79.6	74.2
5	Cooler Fans Area		80.5	76.8
6	Coal Mill Compressor Area		83.7	82.1
7	Raw Mill/Preheater Area		82.1	79.6
8	Coal Mill Area		83.7	80.4
Measured 3 Meter away from Source				

Environmental Clearance F. N. J-11011/421/2011-IA.II (I) Dated 24th February, 2015**Six Monthly Compliance Report –April 2021 to September 2021****ANNEXURE-9****Digital Display Board at Main Gate**

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

Six Monthly Compliance Report –April 2021 to September 2021

ANNEXURE-10

EC accorded advertisement in News Papers