

CCCPL/DACHEPALLI/ENV/2022

28th May, 2022



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 (Tamilnadu)

Sub: Submission of Six Monthly Compliance Report for Environmental Clearance of
5.0 MTPA Captive Limestone Mine of M/s Chettinad Cement Corporation Private
Limited located at Pedagarlpadu & Kesanupalli (V), Dachepalli (M), Guntur
District, Andhra Pradesh for the period of October 2021 to March 2022 - Reg.

Ref: 1. F. No. J-11015/152/2013-IA.II (M) Dated 21st December, 2015 (EC).
2. F. No. J-11015/152/2013/IA.II (M) Dated 14th January, 2021 (Name Change).

Dear Sir,

Reference with the Environmental Clearance cited above, we are herewith attached
six monthly compliance report for the period of October 2021 to March 2022 for 5.0 MTPA
Captive Limestone Mine of M/s Chettinad Cement Corporation Private Limited located at
Pedagarlpadu & Kesanupalli (V), Dachepalli (M), Guntur District, Andhra Pradesh.

This is for your kind information & records please.

Thanking you,

Yours faithfully,

For Chettinad Cement Corporation Private Limited,

Seetharamulu Ch

Joint President- Works (Unit Head)

CC:

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, AP – 522006

Encl: A/a



Chettinad Cement Corporation Private Limited

(Formerly Chettinad Cement Corporation Limited)

Pedagarlpadu Limestone Mine – 5.0 MTPA

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

Environmental Clearance F. N. J-11015/152/2013-IA.II (M) Dated 21st December, 2015

Six Monthly Compliance Report –October 2021 to March 2022

Sl. No.	Condition	Compliance Status
SPECIFIC CONDITIONS:		
i.	The environmental clearance is subject to obtaining the prior permission from CGWA for intersecting the ground water table.	<ul style="list-style-type: none"> Permission obtained from Commissioner, Panchayat Raj & Rural Development & Administrator, APWALTA, Government of Andhra Pradesh for “withdrawal of 2000 KLD of mine pit / ground water to dewater from mine pit and continue the mining operations below water table” vide Lr. No. PRRR05-11028/21/2019-SLNA-GIS-CORD, Dated 20.01.2020. Applied for renewal of NOC vide our letter dated 22.11.2021 and waiting for the renewal Order.
ii.	The project proponent will implement and comply with all applicable safeguard measures as provided in OM No. Z-11013/57/2014-IA.II(M) dated 29th October, 2014.	<ul style="list-style-type: none"> Safeguard measures as provided in OM No. Z-11013/57/2014-IA.II (M) dated 29th October, 2014 are being implemented & followed. Compliance of the safeguard measures is presented as Annexure-1.
iii.	The project proponent shall obtain Consent to Establish and Consent to Operate from the State Pollution Control Board and effectively implement all the conditions stipulated therein.	Consent to Establishment obtained & Consent for Operation Valid till 31.03.2024 for the Pedagarlpadu Limestone Mine has been obtained from Andhra Pradesh Pollution Control Board. All the conditions stipulated in the Consent Orders are being implemented.
iv.	A buffer zone of 50 m (green belt) on either side of the nallah passing through lease area should be developed for protection of the nallah /stream.	A buffer zone of 50 m on either side of the nallah passing through the mining lease area is being developed with Greenbelt for protection of the nallah/stream.
v.	The loose solids should be kept separately from flowing water and flow of effluents to nearby areas outside the lease hold shall be prevented. The paved drains along with arrangements for over burden Dumps and their drainage may be clearly depicted on a contoured map of the mining area.	<ul style="list-style-type: none"> By providing garland drains and catch drains with gully plugs, the loose solids will be separated from flowing water. As there will be no generation of any industrial effluent from the mine, no effluents will flow to nearby areas outside the lease hold. There is no generation of over burden (OB) in the mine area. Hence, the requirement of paved drains and marking the same on the contour map of the Mine area not envisaged.
vi.	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the 1 st and 2 nd order streams, emanating or passing through the mine lease during the course of mining operation.	<ul style="list-style-type: none"> No natural watercourse and water resources will be obstructed due to mining operations. Adequate measures like 50 m safety barrier on both sides of the nallah passing through the mining lease area and greenbelt in the safety barrier is being developed to conserve and protect the water streams.

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vii.	The top soil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.	The top soil (Black Cotton Soil –BCS) is being stored 7.5m buffer zone along the Mine boundary for greenbelt development. The extra BC soil material is being stored separately for future usage.
viii.	Appropriate safeguard measures shall be taken to ensure stability and drainage of dump so that no solid waste/debris flows into the nallah.	There is no Over Burden (OB) and formation of dumps in the mine lease area. Hence, this condition is not applicable to our mine.
ix.	The Over Burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and their phase-wise stabilization shall be carried out. Proper terracing of OB dump(s) shall be carried out. The over burden dump(s) shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dumps. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment, Forest and Climate Change and its Regional office, Chennai on six monthly bases.	There is no Over Burden (OB) in the mine area. Hence, this condition is not applicable to our mine.
x.	Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, temporary OB and mineral dumps to arrest flow of silt and sediment directly into the adjoining river and other water bodies. The water so collected should be utilized for watering the mine area roads, green belt development etc. The drains should be regularly desilted particularly after the monsoon and maintained properly.	<ul style="list-style-type: none"> There is no over burden and mineral dumps in this mine. However, catch drains and siltation ponds of appropriate size will be constructed for the working pit to arrest flow of silt and prevent sediments from reaching nearby water bodies. The water collected will be utilized for water spraying on haul roads, greenbelt development etc. The drains will be regularly desilted, particularly after the monsoon and will be maintained properly.
xi.	Dimension of the retaining wall at the toe of the OB dump(s) and the OB benches within the mine to check run-off and siltation should be based on the rain fall data.	There is no over Burden (OB) available in the mine area. Hence, this condition is not applicable.

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Sl. No.	Condition	Compliance Status
xii.	Plantation shall be raised in an specified area including a 7.5 m wide green belt in the safety zone around the mining lease, OB dump(s), along the roads, etc. by planting the native species in consultation with the local DFO/Agriculture Department. In addition, plantation shall also be raised in the backfilled and reclaimed area and around water body. The density of the trees should be around 1500 plants per ha.	<ul style="list-style-type: none"> Plantation is being developed in the 7.5m safety zone along the mining lease boundary. The green belt will be developed along the roads, in the safety barrier proposed on both sides of the nallah passing through the Mine etc. by planting the native species. There are no backfilling & reclaimed areas available in the lease. The density of the trees being maintained around 1500 plants per ha. As on 31.03.2022, an area of 8.70 ha developed with greenbelt. Photos showing greenbelt is attached as Annexure-2.
xiii.	Effective safeguard measures, such as Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be assured that the Ambient Air Quality parameters conform to the norms prescribed by the CPCB in this regard.	<ul style="list-style-type: none"> There are no crushing and screening plants (no conveyors and no transfer points) within the mining lease area. Regular water sprinkling is being carried out at the area of mining and loading & unloading points. Extensive water sprinkling is being carried out on haul roads. Ambient Air Quality parameters are being conformed to the norms prescribed by the Central Pollution Control Board.
xiv.	Regular monitoring of water quality upstream and downstream of perennial nallahs falling in the impact zone shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment, Forest and Climate Change, its Regional Office, Chennai, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	<ul style="list-style-type: none"> Regular monitoring of water quality upstream and downstream of perennial nallahs falling in the core zone area being carried out and records of monitoring data are being maintained. Data of the same is presented in Annexure-3.
xv.	Appropriate measures shall be taken for treatment of the upper catchment of the mine lease area.	Appropriate measures will be taken for treatment of the upper catchment of the mine lease area. Garland drains/Catch drains/Trenches with gully plugs and a sump will be provided.
xvi.	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	The conservation measures to augment the ground water resources in the area will be Implemented in consultation with the Ground Water Department, Andhra Pradesh/ Regional Director, Central Ground Water Board and as recommended in the Hydro-geological Study Report,(included in the EIA Report).

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Sl. No.	Condition	Compliance Status
xvii.	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon(November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment, Forest and Climate Change and its Regional Office Chennai, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.	<ul style="list-style-type: none"> Regular monitoring of ground water levels and quality is being carried out with third party laboratory in and around the mining lease area. Piezometer (Digital Ground Water Level Recorder) was installed near mine office area to monitor the ground water levels. Photograph of Piezometer & Data of ground water Quality & Levels presented in Annexure-4.
xviii.	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water, required for the project.	<p>Permission obtained from Commissioner, Panchayat Raj & Rural Development & Administrator, APWALTA, Government of Andhra Pradesh for “withdrawal of 2000 KLD of mine pit/ground water to dewater from mine pit and continue the mining operations below water table” vide Lr. No. PRRR05-11028/21/2019-SLNA-GIS-CORD, Dated 20.01.2020.</p> <p>Applied for renewal of NOC vide our letter dated 22.11.2021 and waiting for the renewal Order.</p>
xix.	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.	We have consultation with AP Ground water Dept. and we developed rain water harvesting pond in the ML area. Two Check dams are also constructed on the adjacent Nallah passing across the ML area for improve the ground water levels.
xx.	Appropriate mitigative measures should be taken to prevent pollution of nearby River in consultation with the State Pollution Control Board.	Appropriate mitigative measures like zero discharge system, protection of nallah passing the mining lease area with safety barrier, controlling fugitive emission with extensive water sprinkling, greenbelt along the boundary of mining lease area etc., are being implemented to prevent pollution of nearby water resources.
xxi.	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 mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	<ul style="list-style-type: none"> Vehicular emissions are being monitored regularly to confirm the prescribed standards. Regular maintenance is being done for the vehicles used for limestone transportation. Vehicles carrying the mineral will not be overloaded and more than height of the body.

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xxii.	Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Controlled blasting is being practiced. Mitigate measures for control of ground vibrations and to arrest fly rocks and boulders are implemented by following the precautions indicated below. ➤ Carrying out blasting operations with low density explosives to have a heaving effect than an explosion. ➤ We were using Nonel delay detonators to minimize charge per delay, ground vibration and generation of fly rock.
xxiii.	Drills shall either be operated with dust extractors or equipped with water injection system.	The drilling dust is being controlled by wet drilling system provided in the drill machine.
xxiv.	Mineral handling area shall be provided with the adequate number of high efficient dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	<ul style="list-style-type: none"> The mining area is being sprayed with water to suppress dust. Water sprinkling is being done while handling materials containing finer particles. There is no conveyor to transport the mined Limestone to the Cement plant. Hence, there will no transfer points, which need dust control system. Photographs of dust suppression are attached as Annexure-5.
xxv.	Sewage Treatment Plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.	<ul style="list-style-type: none"> Sewage Treatment Plant (STP) with 150 KLD capacity have been installed for the colony. All the vehicles are used for mining operation are hired on contractual basis. Hence, no Workshop is envisaged.
xxvi.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For this purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Pre-placement medical examination is being carried out. Periodical medical examination for the employees and workers working in the mine are being carried out and records maintained. The Schedule of Medical examination of the workers has been prepared and it is being followed.
xxvii.	Regular monitoring of free silica in the dust will be carried out and records maintained. It shall be ensured that the levels of silica do not exceed the prescribed limit. The workers will be provided with personal protective measures to guard against inhaling silica dust	Regular monitoring of free silica in the dust carried out and records maintained. It will be ensured that the levels of free silica do not exceed the prescribed limit. The workers are being provided with personal Protective measures to guard against inhaling dust.
xxviii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical healthcare, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	As the proposal is for mining activity, no major construction work is envisaged. Only office shed and toilet were constructed, which do not require any accommodation facilities for the construction labour.

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xxix.	The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered flora as well as endangered fauna in the study area. 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 at Chennai within 3 months.	<ul style="list-style-type: none"> There is no endangered fauna or endangered flora in the study area (As per EIA studies). Hence, the need for preparation of conservation plan for flora and fauna and allocation of funds for Implementation of the conservation plan are not envisaged. However, Bund will be developed along the lease boundary. Greenbelt is being developed in phase manner along mining lease boundary with local/native species. Control blasting techniques was adopted.
xxx.	The critical parameters such as RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300 m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.II(M)dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	<ul style="list-style-type: none"> The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300 m distance or within the nearest habitation, whichever is closer being monitored periodically. The EC compliance status report covering the monitoring data is being uploaded on the website of our company and the same data is being displayed on a display board at Mines office entrance gate. There will be no generation of industrial effluent from the mining operation and the domestic waste water will be sent to septic tank followed by soak pit.
xxxi.	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval.	Noted. A Final Mine Closure Plan along with details of Corpus Fund will be submitted to the Ministry of Environment, Forest and Climate Change, 5 years in advance prior to the final mine closure for approval.
xxxii.	The project proponent shall undertake all the commitments made during the public hearing and effectively address the concerns raised by the locals in the public hearing as well as during consideration of the project, while implementing the project.	<ul style="list-style-type: none"> Major concerns raised during public hearing were employment to the locals, maintain pollution free environment & develop basic amenities in nearby villages. Employment was given to local eligible people and other concerns are being addressed through CSR/ESC plan.
GENERAL CONDITIONS:		
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.	Condition is duly noted. Prior approval will be obtained from MOEF&CC for change in technology and scope of working if any.

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Sl. No.	Condition	Compliance Status
ii.	No change in the calendar plan including excavation, quantum of mineral limestone and waste should be made.	Condition is duly noted. No change in the calendar plan including excavation, quantum of mineral limestone and waste will be made.
iii.	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	<ul style="list-style-type: none"> Four AAQ stations are established in the core zone as well as in the buffer zone based on meteorological data. NABL approved Third Party Laboratory is engaged to monitor the AAQ parameters. Monitored data of PM10, PM2.5, SO2 & NO2 of AAQ stations established at buffer zone is presented in Annexure-6.
iv.	Data on ambient air quality RSPM (Particulate matter with size less than 10micron i.e., PM10) & NOx should be regularly submitted to the Ministry of Environment, Forest and Climate Change including its Regional office located at Chennai and the State Pollution Control Board / Central Pollution Control Board once in six months.	AAQ monitored data is being regularly submitted to MOEF&CC Regional office located at Chennai and the APPCB / CPCB along with six monthly compliance reports.
v.	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Fugitive dust emissions from all the sources in being controlled. Water spraying arrangement on haul roads, loading and unloading points are provided and properly maintaining.
vi.	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	<ul style="list-style-type: none"> Measures like good maintenance of the mining machinery and vehicles, acoustic enclosures, controlled blasting, greenbelt development along the boundary of ML Area etc., are ensured for maintaining noise levels below 85 dBA in work environment. Ear plug/Muffs are being provided to the operators of HEMM on commencement of mining.
vii.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	<ul style="list-style-type: none"> There will not be any industrial effluent generated from mining operations. No workshop has been proposed in the ML area. Hence, there will not be any need for providing treatment system for water. Mining equipment have been maintained & serviced at outside the mine lease.

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Sl. No.	Condition	Compliance Status
viii.	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	<ul style="list-style-type: none"> Personnel working in the mine will be provided with adequate training, information on safety and health aspects. Personal Protective Equipment (PPE) is being given to the mines personnel and the usage of the same by them is being ensured. Occupational health surveillance program of the workers will be undertaken periodically to observe any contractions due to exposure to dust and if needed, will take corrective measures.
ix.	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Separate environmental management cell with suitable qualified personnel is in place. Organizational structure for environmental management is depicted in Annexure –7 .
x.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment, Forest and Climate Change and its Regional Office located at Chennai.	Adequate amount incurred on environmental management activities like Greenbelt Development, Water Sprinkling & Fugitive Emission Controlling.
xi.	The project authorities should inform the Regional Office located at Chennai regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Intimation on final approval of the project by the concerned authorities and commencement of land development works dated 27.03.2019 was submitted to MOEFCC Regional Office located at Chennai on 20.11.2019.
xii.	The Regional Office of this Ministry located at Chennai shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Full cooperation will be extended to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.

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xiii.	The project proponent shall submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by email) to the Ministry of Environment, Forest and Climate Change, its Regional Office Chennai, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the Environmental 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 Ministry of Environment, Forest and Climate Change, Chennai, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board.	<ul style="list-style-type: none"> Six monthly compliance reports on the statuses of compliance of the stipulated Environmental Clearance conditions including results of monitored data is being submitted to Ministry of Environment, Forest and Climate Change, its Regional Office Chennai through email (soft copy in PDF) and in hard copies to CPCB, ZO at Bangalore & APPCB, RO at Guntur. Compliance reports are being displayed in our website at following link. https://www.chettinad.com/cements_plants.php?site=Dachepalli
xiv.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisath/ 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 website of the Company by the proponent.	<ul style="list-style-type: none"> EC clearance letter sent to concerned Pedagarlpadu Village Panchayat & Kesanupalli Village Panchayat, Dachepalli Mandal and the District Collector, Guntur. The Environmental Clearance letter has been put on the web site of the company.
xv.	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.	--
xvi.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall be put on the website of the company along with the status of compliance of Environmental Clearance conditions and shall also be sent to the Regional Office of the Ministry of Environment, Forest and Climate Change, Chennai by e-mail.	<p>Environmental Statement for financial year ending 31st March 2021 in Form-V was submitted to Andhra Pradesh Pollution Control Board & MOEFCC RO Chennai on 20.09.2021 and same was kept on our company website at following link.</p> <p>https://www.chettinad.com/cements_plants.php?site=Dachepalli</p>

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SI. No.	Condition	Compliance Status
xvii.	The project authorities should advertise at least in two local newspapers of the District or State widely circulated in which the project is located and one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded Environmental Clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at http://envfor.nic.in . A copy of the same should be forwarded to the Regional Office of this Ministry located at Chennai.	<ul style="list-style-type: none"> The advertisement in widely circulated two local newspapers (THE HINDU dated 24.12.2015 (in English) & EENADU dated 24.12.2015 (in Telugu) of the Guntur District, Andhra Pradesh have been published informing the public that the Environmental Clearance had been accorded and a copy of the clearance letter is available with the Andhra Pradesh Pollution Control Board and also at web site of the Ministry of Environment, Forests and Climate Change at http://envfor.nic.in. The copies of the advertisements have already been submitted to the Regional Office of this Ministry located at Chennai. Photos of the newspaper clippings presented in Annexure –8.

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ANNEXURE-1
Compliance with applicable safeguard measures as provided in
OM No. Z-11013/57/2014-IA.II(M) dated 29th October, 2014.

Sl. No.	Condition	Compliance Status
1	The Project Authority shall adopt Best Mining Practice for the given mining conditions. In the mining area, adequate number of check dams, retaining walls/structures, garland drains and settling ponds should be provided to arrest the wash-off with rainwater in catchment area.	Wet drilling and controlled blasting technics is being practiced. The following preventive measures are being followed for control of ground vibrations, fly rocks and generation oversize boulders. <ul style="list-style-type: none"> ➤ Carrying out blasting operations with low density explosives to have a heaving effect than an explosion. ➤ Using NONEL detonators in blasting for reduce the charge per delay for control the ground vibrations. ➤ Practicing the bottom initiation system with deck charging to reduce the noise levels & fly rock generation. ➤ The Garland drains are being developed around the ML area. ➤ The Two Check dams are constructed in the Nallah passing across the ML area for rain water harvesting pond developed to improve the ground water levels.
2	The natural water bodies and or streams which are flowing in and around the village should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Authorities have to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table.	<ul style="list-style-type: none"> ➤ The natural water bodies and or streams which are flowing in and around the villages are not disturbed due to our mining activities. ➤ Regular monitoring of ground water quality and levels are being carried out.
3	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. The Project Proponents (PPs) must ensure that the biological clock of the villagers is not disturbed by orienting the floodlights/ masks away from the villages and keeping the noise levels well within the prescribed limits for day/night hours.	<ul style="list-style-type: none"> ➤ All necessary precautions are being taken to comply these conditions. ➤ Noise levels are maintaining within the limits for day/night.
4	The Project Authority shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing. In this context, Project Authority should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide midday shelter from the scorching sun should be scrupulously guarded against felling, lest the cattle abandon the grazing ground or return home by noon.	This condition is not applicable as there was no existing grazing land present in the mine lease.

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5	Wherever blasting is undertaken as part of mining activity, the Project Authority shall carry out vibration studies well before approaching any such habitats or other buildings to evaluate the zone of influence and impact of blasting on the neighborhood. Within 500 meters of such sites vulnerable to blasting vibrations, avoidance of use of explosives and adoption of alternative means of mineral extraction, such as ripper/dozer combination/rock breakers/ surface miners etc. should be seriously considered and practiced wherever practicable. A provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained. The covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the Competent Authority.	We will be following as per conditions stipulated.
6	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. Crusher and material transfer points should invariably be provided with Bag filters and or dry fogging system. Belt conveyors should be fully covered to avoid air borne dust.	Main haulage road being provided with permanent water sprinklers and provision for regular dust suspension on haul roads with water tanker is arranged. The Crushing unit, belt conveyors and material transfer points are provided in the Plant area with adequate dust control systems like bag filters, covered conveyors water spraying etc.
7	The Project Authority shall ensure that the productivity of agricultural crops is not affected due to mining operations. Crop Liability Insurance Policy has to be taken by the PP as a precaution to compensate for any crop loss. The impact zone shall be 5km from the boundary of mine lease area for such insurance policy. In case, several mines are located in a cluster, the Associations of owners of the cluster mines, formed inter-alia, to sub-serve such an objective, shall take responsibility for securing such Crop Liability Policy.	We will ensure that the any productivity of agricultural crops is not affected due to our mining operations. The other points in condition will be complied. We are developing thick green belt along the Mines boundary to protect adjacent agricultural lands.
8	In case any village is located within the mining leasehold which is not likely to be affected due to mining activities during the life of mine, the Expert Appraisal Committee (EAC) should consider the proposal of Environmental Clearance (EC) for reduced mining area. The Mining lease may be executed for the area for which EC is accorded. The mining plan may also be accordingly revised and required stipulations under the MMDR Act, 1957 and MCR, 1960 met.	Not applicable in our case

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9	Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The PP shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.	Not applicable in our case
10	Likewise, alteration or re-routing of foot paths, pagdandies, cart roads, and village infrastructure/public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternative arrangements shall be made first and then only the area acquired. In these types of cases, Inspection Reports by site visit by experts may be insisted upon which should be done through reputed Institutes.	Not applicable in our case
11	As CSR activities by Companies including the Mining Establishments has become mandatory up to 2% of their financial turn-over, Socio Economic Development of the neighborhood Habitats could also be planned and executed by the PPs more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers on the lines as required under TOR. "R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village located in the mine lease area will be shifted or not. The issues relating to shifting of Village including their R&R and socio-economic aspects should be discussed in the EIA report."	<ul style="list-style-type: none"> We are carrying 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. <p>R&R is not required as there is no village/habitation was relocated for this project.</p>

Greenbelt Development

Year of Plantation	No's Saplings Planted	Area in Ha	Survival Rate (%)
2018-19	2700	2.43	97%
2019-20	2130	1.81	98%
2020-21	4010	2.51	98%
2021-22	2370	1.95	90%
Total	11210	8.70	96%





Plantation in Mine lease & along the lease boundary



Plantation in Mine lease & along the lease boundary

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Plantation at Mines office complex



Water Quality of Upstream & Downstream Nallah's

Sl. No.	Parameter Name	UOM	Oct'21 – Mar'22	
			Upstream Nallah Water	Downstream Nallah Water
1	Total coliforms	MPN	170	280
2	Colour	Hazen	5.0	5.0
3	Turbidity	NTU	3.8	5.2
4	pH @ 25°C	--	7.12	7.22
5	Total Dissolved Solids @ 180°C	mg/L	334	472
6	Boron as B	mg/L	0.50	0.312
7	Calcium Hardness (as CaCO ₃)	mg/L	92	112
8	Chloride as Cl	mg/L	130	98
9	Fluoride as F	mg/L	0.22	0.13
10	Iron as Fe	mg/L	0.14	0.42
11	Magnesium Hardness (as CaCO ₃)	mg/L	72	54
12	Copper as Cu	mg/L	BLQ	BLQ
13	Nitrate as NO ₃	mg/L	4	4.9
14	Selenium as Se	mg/L	0.006	BLQ
15	Sulphate as SO ₄	mg/L	18	24
16	Total Hardness as CaCO ₃	mg/L	164	166
17	Total Alkalinity as CaCO ₃	mg/L	70	128
18	Chemical Oxygen Demand (COD)	mg/L	36	74
19	Sodium as Na	mg/L	20	34
20	Conductivity @ 25°C	µS/cm	610	755
21	Free Residual Chlorine	mg/L	BDL	BDL
22	Phenolic Compound	mg/L	BDL	BDL
23	Cadmium as Cd	mg/L	BLQ	BLQ
24	Cyanide as CN	mg/L	BDL	BDL
25	Lead as Pb	mg/L	BLQ	BLQ
26	Mercury as Hg	mg/L	BLQ	BLQ
27	Total Arsenic as As	mg/L	BLQ	BLQ
28	Hexavalent chromium Cr6+	mg/L	BDL	BDL
29	Silica as SiO ₂	mg/L	4.90	9.8

BLQ-Below the Limit of Quantitation, BDL-Below the Detectable Limit

ANNEXURE-4
Ground Water Levels

Sl. No.	Piezometer Location	Meters Below Ground Level	
		Post Monsoon Season 25.11.2021	Winter Season 05.01.2022
1	Near Mine Office	7.6	8.5
2	Plant Site	7.2	7.8

Piezometer (Digital Ground Water Level Recorder) installed at Mine Office & Manual ground water level measurement


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Ground Water Quality (Requirement Limits as per IS 10500-2012)
Post-Monsoon Season (Oct'21 - Dec'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	5	2	<1	5
3	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.2	4.5	2.2	4.2	0.3	0.3
5	pH @ 25°C	--	7.35	7.90	6.5	7.80	7.82	7.45
6	Taste	--	--	--	--	--	--	--
7	Total Dissolved Solids @180°C	mg/L	1028	1415	708	175	755	1670
GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS								
8	Boron as B	mg/L	0.122	0.243	0.15	0.243	0.218	0.041
9	Calcium Hardness (as CaCO ₃)	mg/L	232	550	265	50	208	240
10	Chloride as Cl	mg/L	208	430	145	32	214	274
11	Copper as Cu	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
12	Fluoride as F	mg/L	0.31	0.48	0.65	0.10	0.35	0.27
13	Iron as Fe	mg/L	BDL	BDL	0.12	BDL	0.10	BDL
14	Magnesium Hardness (as CaCO ₃)	mg/L	104	305	100	19	140	160
15	Manganese as Mn	mg/L	BLQ	0.048	0.012	0.019	0.026	0.008
16	Nitrate as NO ₃	mg/L	5.9	27	15	18	40	24
17	Selenium as Se	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
18	Sulphate as SO ₄	mg/L	314	314	65	27	160	160
19	Total Hardness as CaCO ₃	mg/L	338	560	375	75	345	410
20	Total Alkalinity as CaCO ₃	mg/L	269	315	205	59	304	445
21	Anionic SurfaceActive Agent as MBAS	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
22	Sodium as Na	mg/L	19	62	25	27	30	110
23	Conductivity @ 25°C	µS/cm	2184	2574	1202	333	1455	2928
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



Chettinad Cement Corporation Private Limited

(Formerly Chettinad Cement Corporation Limited)

Pedagarlapadu Limestone Mine – 5.0 MTPA

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

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

Winter Season (Jan'22 - Mar'22)

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	5	<1	<1	<1
3	Odour	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	0.4	4.0	2.0	4.0	0.5	0.4
5	pH @ 25°C	--	7.28	7.82	6.20	7.64	7.70	7.52
6	Taste	--	--	--	--	--	--	--
7	Total Dissolved Solids @180°C	mg/L	484	478	464	184	482	490
GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS								
8	Boron as B	mg/L	0.22	0.352	0.13	0.188	0.222	0.030
9	Calcium Hardness (as CaCO ₃)	mg/L	134	122	88	44	128	86
10	Chloride as Cl	mg/L	124	150	70	30	84	110
11	Copper as Cu	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
12	Fluoride as F	mg/L	0.27	0.39	0.58	0.12	0.31	0.25
13	Iron as Fe	mg/L	BDL	BDL	0.1	BDL	0.09	BDL
14	Magnesium Hardness (as CaCO ₃)	mg/L	36	57	24	17	32	40
15	Manganese as Mn	mg/L	BLQ	0.50	0.011	0.016	0.027	0.007
16	Nitrate as NO ₃	mg/L	5.2	15	10	7	12	12
17	Selenium as Se	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
18	Sulphate as SO ₄	mg/L	120	84	28	14	38	40
19	Total Hardness as CaCO ₃	mg/L	170	179	112	61	160	126
20	Total Alkalinity as CaCO ₃	mg/L	154	112	76	54	112	108
21	Anionic Surface Active Agent as MBAS	mg/L	BDL	BDL	BDL	BDL	BDL	BDL
22	Sodium as Na	mg/L	17	14	13	8	14	20
23	Conductivity @ 25°C	µS/cm	984	858	768	324	842	848
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

Environmental Clearance F. N. J-11015/152/2013-IA.II (M) Dated 21st December, 2015**Six Monthly Compliance Report –October 2021 to March 2022****ANNEXURE-5****Dust Suppression at Haul Roads through Water Tanker**

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ANNEXURE-6
Ambient Air Quality Monitoring Data October-21 to March-22
Particulate Matter Less than 10 Microns (PM₁₀) - µg/m³

Sl. No.	AAQ Location	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22
1	Near Mines Office	44.1	53.0	52.0	51.5	52.8
2	Pedagarlapadu Village	45.3	55.4	52.0	53.8	52.5
3	Takkellapadu Village	53.9	51.4	50.2	51.4	52.4
4	Kachavaram Village	46.0	49.8	47.0	47.8	46.5
5	Veerapuram Village	52.2	55.4	53.8	53.5	52.4
NAAQMS:2009 Standards:		100 µg/m ³				

Particulate Matter Less than 2.5 Microns (PM_{2.5}) - µg/m³

Sl. No.	AAQ Location	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22
1	Near Mines Office	17.2	21.4	20.0	23.2	22.1
2	Pedagarlapadu Village	19.3	24.5	22.4	22.1	21.4
3	Takkellapadu Village	22.0	20.8	18.8	18.5	17.2
4	Kachavaram Village	21.1	18.4	16.8	18.8	17.2
5	Veerapuram Village	24.0	24.5	22.0	24.1	23.2
NAAQMS:2009 Standards:		60 µg/m ³				

Sulphur Dioxide (SO₂) - µg/m³

Sl. No.	AAQ Location	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22
1	Near Mines Office	8.8	12.9	11.8	10.8	11.2
2	Pedagarlapadu Village	11.1	11.4	9.8	11.4	12.5
3	Takkellapadu Village	10.6	11.5	9.8	9.9	9.4
4	Kachavaram Village	8.5	15.4	13.5	15.5	15.3
5	Veerapuram Village	9.7	13.4	11.4	13.4	12.5
NAAQMS:2009 Standards:		80 µg/m ³				

Nitrogen Dioxide (NO₂) - µg/m³

Sl. No.	AAQ Location	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22
1	Near Mines Office	9.0	14.2	12.1	15.6	14.8
2	Pedagarlapadu Village	13.1	17.4	15.4	17.4	17.2
3	Takkellapadu Village	11.5	14.4	13.0	14.5	13.8
4	Kachavaram Village	15.4	17.8	15.8	16.4	16.0
5	Veerapuram Village	16.3	17.8	15.9	15.8	14.5
NAAQMS:2009 Standards:		80 µg/m ³				



Chettinad Cement Corporation Private Limited

(Formerly Chettinad Cement Corporation Limited)

Pedagarlpadu Limestone Mine – 5.0 MTPA

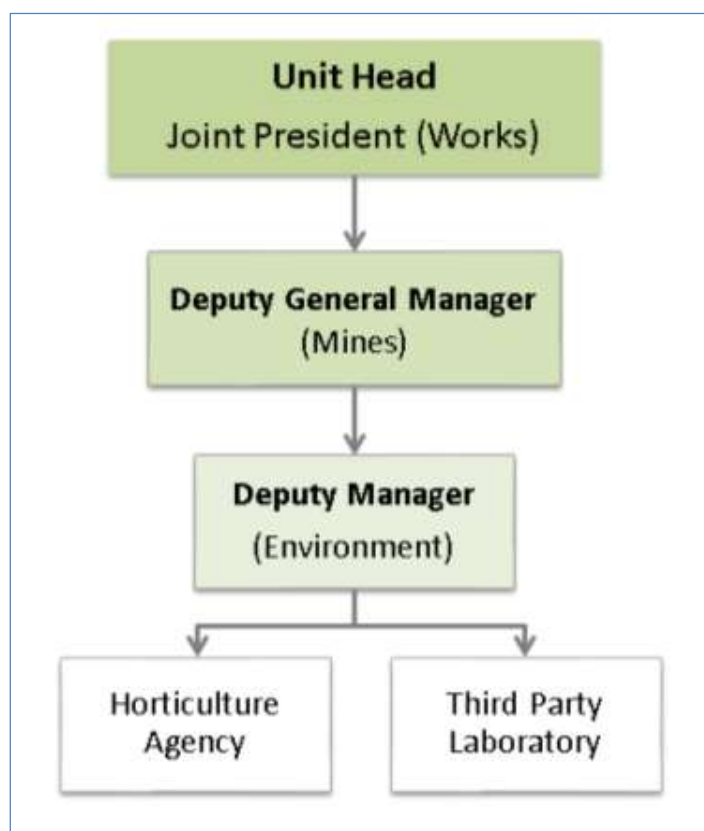
Pedagarlpadu & Kesanupalli (V),
Dachepalli (M), Guntur District, Andhra Pradesh – 522437

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ANNEXURE- 7

Organizational Structure for Environmental Management



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ANNEXURE-8

Newspaper clippings of EC approval