F. No. J-11011/518/2009-IA.II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

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Dated: 22nd February, 2019

To

Shri Sundar Raj Srinivasan,
Assistant Vice President - EHS,
M/s. Chettinad Cement Corporation Limited
4th floor, Rani Seethai Hall Building,
603, Anna Salai, Nungambakkam,
Chennai, Tamil Nadu – 600006.

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Subject: Expansion of Cement plant (Clinker 1.22MTPA to 2.80 MTPA, Cement 2.00 MTPA to 4.50 MTPA) along with Captive Power Plant (18MW to 48 MW) by M/s. Chettinad Cement Corporation Limited at Village Karikkali and Dholipatti and Limestone Mine (Seethainagar Mines, 379 ha and 2.00 MTPA to 4.50 MTPA) at village Alambadi, Mallapuram and Karikkali, Taluk Vedasandur, District Dindigul, Tamil Nadu – **Environmental Clearance for installation of slag grinding unit of 1.0 MTPA capacity under para 7(ii) of EIA Notification 2006.**

Sir,

This refers to the application of M/s. Chettinad Cement Corporation Limited made vide proposal no. IA/TN/IND/83751/2018 dated 28th October, 2018 seeking environmental clearance for installation of slag grinding unit of 1.0 MTPA capacity under para 7(ii) of EIA Notification, 2006. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

The proposal cited above was considered during the 2nd meeting of Reconstituted Expert Appraisal Committee [REAC] (Industry-I) held on 8-10th December, 2018. The EAC proceedings of the proposal cited above is given as below.

Details submitted by the Project Proponent

2.0 M/s Chettinad Cement Corporation Limited operating Cement plant (Clinker 1.22MTPA to 2.80 MTPA, Cement 2.00 MTPA to 4.50 MTPA) along with Captive Power Plant (18MW to 48 MW) at village Karikkali and Dholipatti and Limestone Mine (Seethainagar Mines, 379 ha and 2.00 MTPA to 4.50 MTPA) at village Alambadi, Mallapuram and Karikkali, Taluk Vedasandur, District Dindigul, Tamil Nadu.

3.0 The existing project was accorded environmental clearance for expansion of cement plant (Clinker 1.22 MTPA to 2.80 MTPA & Cement 2.00 MTPA to 4.50 MTPA) along with Captive Power Plant (18 MW to 48 MW) vide MoEF&CC letter No. J-11011/518/2009-IA-II (I) dated 02.08.2010. EC for further expansion of cement plant (Cement 4.5 MTPA to 7.0 MTPA) and CPP (48 MW to 78 MW) along with 6 MW Waste Heat Recovery Boiler by addition of Cement Line-III of 2.5 MTPA and CPP of 1x30 MW was obtained vide MoEF&CC letter No. J-11011/110/2011-IA-II (I) dated 29.11.2012. While the CPP of 30 MW was commissioned in July 2014, Line-III of 2.5 MTPA along with 6 MW WHRB is not initiated due to lack in cement demand in the market and also due to Financial Constraints.

4.0 Karikkali cement plant is now being operated for 2.8 MTPA Clinker, 4.5 MTPA Cement and CPP of 78 MW. Renewed Consent to Operate was obtained from Tamil Nadu pollution Control Board for the Cement Plant vide orders 170817942226 (Water Act) & 170827942226 (Air Act) dated 08.05.2017, Valid till 31.03.2018 and for CPP vide orders 170817943033 (Water Act) & 170827943033 (Air Act) dated 08.05.2017 valid till 31.03.2018.

5.0 M/s. Chettinad Cement Corporation Private Limited proposes modification in the existing EC for Change in Product-Mix, Grinding of Granulated Blast Furnace Slag (GGBS) in Karikkali Cement Plant at 1.0 MTPA as Batch Operation within the EC quantity of 4.5 MTPA cement grinding. (Cement and Slag grinding will be 4.5 MTPA). The proposed capacity for different products for new site area as below:

Name of unit	**No. of Units**	**Capacity of each Unit**	**Production Capacity**
Clinker Production-Existing	Line I Line II	1.22 MTPA 1.58 MTPA	2.8 MTPA
Clinker Production-Proposed	-	Nil	No change to existing Production
Cement Production-Existing	Line I Line II	2.0 MTPA 2.5 MTPA	4.5 MTPA
Cement & Slag Production-Proposed	Line I Line II	2.0 MTPA 2.5 MTPA	4.5 MTPA (within this Consented Qty. Slag grinding of 1.0 MTPA will be carried out as Batch operation)
Thermal Power Plant-Existing	3	1x18 MW & 2x30 MW	78 MW

6.0 The proposed activity will be carried out within the existing plant premises at S.F.Nos. 498 parts etc., of Karikkali village and S.F.Nos. 67 parts etc., of Dhollipatti Village, Vedasandur Taluk, Dindigul District, Tamil Nadu.

7.0 The land area acquired for the plant is 72.95 Ha (No additional area for the proposed Change in Product-Mix). No forestland is involved. The entire land has been acquired for the project. Of the total area, 23.29 ha (31.93 %) land is under green belt.

8.0 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

9.0 No additional capital is required for the proposed activity. Existing Project cost is Rs. 1,100.27 crores (No change in project cost). An amount of Rs. 91.32 Crores has been spent as EMP Capital Cost and Rs. 3.50 Crores/Annum is being spent as Operating Cost for EMP measures. There will be no increase in man power. The existing Plant provides direct employment to 423 persons and indirect employment to 500 persons.

10.0 The electricity load of 93 MW will be sourced from Captive Thermal Power Plants (1x18 MW & 2x30 MW) and TNEB (15 MW). Company has also installed standby DG Sets of 3x1.5 MW and 1x250 KVA capacity.

11.0 Proposed raw material and fuel requirement for project are:

Sl. No.	Raw Material	Source	Demand, MTPA	Mode of Transportation	Storage Facilities
I 1	Limestone	Own Mines nearby	4.040	From crusher by closed conveyors to plant	Stacker -Reclaimer system of capacity of 2x55,000 Tons.
2	Iron Ore &Bauxite	Bellary Salem	0.061 0.061	Covered 20 Ton truck by road	3x6000 Tons covered stock pile.
3	Gypsum	Salem &Thoothukudi	0.270	Covered 20 Ton truck by road & rail	1x10,000 T for gypsum linear covered stockpile
4	Fly Ash	Mettur&Thoothukudi TPSs	0.948	Covered 40 Ton browsers by road	Dry Fly Ash in 5000 T RCC Silo. Wet fly ash Storage of 1x14000 T covered stockpile
5	Slag	Jindal Steel Bellary & Salem	0.482	Covered 20 Ton trucks by road	1X14000 T for wet slag with linear covered stockpile
6	Coal	Imported & Indian	0.297	By Rail & Covered 20 Ton Trucks by roads	Linear stockpiles of 2x3,000 T for Lignite/Petcoke and 2x10,000 T for coal
7	Power Plant Coal		0.198		
II	Cement	-	4.500	By Rail & Covered 20 Ton Trucks by roads	3 Nos. RCC silos of capacity 10,000 Tons each
III	Slag for proposed Slag Grinding	Jindal Steel Bellary & Salem	1.000	Covered 20 Ton trucks by road	Linear covered stockpile

12.0 There will be no increase in water demand due to the proposal. Karikkali Cement Complex requires 2,200 cu.m/day raw water which is met from the rain water harvested in about 14 Mine Pits in Seethainagar & Dholipatti Mines. Central Ground Water Authority

(CGWA) has permitted to draw 2,200 cu.m/day rain water harvested in the Mine Pits vide its Letter No. 21-4(186)/SECR/CGWA/2010-23 dated 08.02.2013.

13.0 DM/RO rejects & Workshop effluents from Cement Plant of 20 cu.m/day from Cement Plant and Boiler Blowdowns & Cooling Tower Blowdowns from CPPs of 452 cu.m/day and thus, total 472 cu.m/day trade effluents are collected, neutralized and settled in a ETP of 500 cu.m/day and the treated effluent is being used at Coal Handling System, Dust Suppression System and Ash Handling System fully. About 225 cu.m/day Domestic Sewage is being generated from the Complex (Cement Plant-133 cu.m/day, Power Plant- 17 cu.m/day and Township - 75 cu.m/day). The combined sewage from Cement and Power Plants are treated in a 150 cu.m/day Sewage Treatment Plant in the Plant and Treated Sewage is being used for Green Belt.

14.0 The domestic sewage of 75 cu.m/day from the Township is separately treated in a 100 cu.m/day STP and the Treated Sewage is utilized for Green Belt in the Township as well as Lorry Parking Areas. Treated Effluents and Sewage are in compliance with stipulated Norms by TNPCB. Thus, 'Zero Effluent Discharge' is practiced at the Complex

15.0 Certified EC Conditions Compliance Report has been issued by the MoEF& CC, Regional Office, Chennai vide F.No. EP/12.1/2010-11/9/TN/1544 dated 28.09.2018.

16.0 Impact prediction for the proposed enhancement in the production / change in product mix / modernization, etc.:

I. Air Emissions: Adequate Air Pollution Control Measures (APC) measures to control PM emissions are provided in the Cement Complex viz. Electrostatic Precipitators to Clinker Cooler & Boilers, Bag House to Raw Mill/Kiln, Coal Mill, Cement Mill, etc. to control PM emission <30 mg/Nm^3. The dust collected from Bag House/Filters, etc. are totally recycled in the process for cement manufacturing. Existing APC Measures are adequate for Slag Grinding also

II. Water: There is no additional water demand for proposed Slag Grinding. Also, there is no increase in Effluent & Sewage Generation, their treatment and disposal i.e. there is no change to the existing Status.

III. Solid Wastes: No change in the Quantity of Solid Wastes Generation, Storage and its Disposal due to the Slag Grinding proposal.

IV. Green Belt: Total Plant Area is 72.95 Ha. So far, 47,856 Saplings have been planted over an area of 23.29 Ha (Coverage 31.93 %). Green Belt in an extent of 24.07 Ha (**Coverage 33.00 %**) will be covered by next year.

V. Rain Water Harvesting: Rainwater harvesting pond with a capacity of 1200 m^3 has been provided in the plant premises. 100 % water requirement for existing plant & domestic purpose are being met from rain water harvested from the mine pits. No ground/surface water is being drawn for any of the requirements of the plant.

VI. Occupational Health: CCCPL Occupational Health Centre at the Plant has been established with a full-fledged dispensary equipped with facilities: X-ray unit, Computerized ECG, Laboratory, Computerized blood chemistry analyzer, Ultra Short Wave Therapy, Physiotherapy Unit, Audiometer & Spirometer, Ambulance, etc. CCCPL is also providing ergonomic support to the workers with periodical review.

17.0 Proposed mitigation plan for dealing of additional pollution load: EMP is formulated for mitigation of adverse impacts and is based on present environmental status and impact appraisal.

I. Air Environment

- All efforts shall be undertaken to maintain the PM emission levels from the main stacks within 30 mg/Nm^3.
- The periodical evaluation for the efficiency performance of ESPs and Bag Filters shall be carried out.
- Fugitive emissions due to storage, transportation, etc. and the leakages and spillages shall be continuously monitored and controlled.
- Water conservation measures shall be undertaken for effective implementation. Cooling water is put into closed circuit to minimize the evaporation losses.
- Thermal insulation is provided wherever necessary to minimize heat radiation from the equipment, piping etc, to ensure protection of personnel.

II. Noise Levels

- All rotating items are well lubricated and provided with enclosures as far as possible to reduce noise termination.
- Extensive vibration monitoring systems are provided to check and reduce vibrations.
- For all fans, compressors etc. vibration isolators are provided to reduce noise.
- Provision of silencers are made wherever possible.
- Proper lubrication and housekeeping are maintained.
- The operator provided with necessary safety and protection equipment like ear plugs, ear muffs etc.

III. Water Environment

- The drawl of ground water shall be minimized and water control measures shall be undertaken.
- No trade effluent shall be discharged from the Plant.
- Cooling water is put into closed circuit to minimize the evaporation losses.
- The domestic sewages from the Cement Plant, Power Plant and Township shall be treated effectively in the Sewage Treatment Plants to meet the TNPCB Discharge Norms and the treated sewage shall be used for Green Belt.
- No percolation of treated water to the deep ground water table is done.
- Periodical monitoring for specific parameters shall be done regularly.

- CCCPL shall maintain the existing rain water harvesting structures effectively to supplement the water supply from the bore wells.

IV. Land Environment

- It should be ensured that there is no industrial solid waste from the Plants.
- The fly ash and bottom ash from the Thermal Power Plant will be consumed in the Cement Plant fully.
- Solid wastes from STP Plant shall be used as manure for Green Belt.
- Waste Oil shall be collected and sold to the TNPCB authorized Agency for further treatment & disposal.
- The municipal wastes shall be collected, transported, treated in a landfill (composting) within the Plant vicinity to make use of it as manure for Green Belt.

V. Green Belt

- Green Belt shall be maintained effectively. Local species and fruit bearing trees may also be developed to have a thick canopy cover.
- The treated sewage shall be used fully for the Green Belt development.

18.0 EMP Budget: Existing EMP Operating Budget of Rs.3.50 crores/annum of shall be maintained for effective implementation.

19.0 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity

Observations and recommendations of the Committee: -

20.0 After detailed deliberations, the committee recommended for environmental clearance for change in product-mix for grinding of granulated Blast Furnace Slag (GGBS) of 1.0 MTPA as Batch Operation within the EC quantity of 4.5 MTPA cement grinding. (i.e. Cement and Slag grinding will be 4.5 MTPA) under para 7(ii) of the EIA Notification, 2006 subject to following additional conditions:

i. The emissions from cement grinding units shall be restricted to $\leq 30 mg/Nm^3$.

ii. The cement grinding capacity shall be restricted to 4.5 MTPA inclusive of granulated slag.

iii. Industrial vacuum cleaners shall be used to control the road dust within the plant and its vicinity.

iv. All other terms and conditions mentioned in the earlier EC shall remain unchanged.

21.0 The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to accord environmental clearance for environmental clearance for change in product-mix for grinding of granulated Blast Furnace Slag (GGBS) of 1.0 MTPA

as Batch Operation within the EC quantity of 4.5 MTPA cement grinding. (i.e. Cement and Slag grinding will be 4.5 MTPA) under para 7(ii) of the EIA Notification, 2006 subject to following additional conditions:

i. The emissions from cement grinding units shall be restricted to $\leq 30 mg/Nm^3$.

ii. The cement grinding capacity shall be restricted to 4.5 MTPA inclusive of granulated slag.

iii. Industrial vacuum cleaners shall be used to control the road dust within the plant and its vicinity.

iv. All other terms and conditions mentioned in the earlier EC letter no. J-11011/518/2009-IA.II(I) dated 2/8/2010 shall remain unchanged.

22.0 The PP shall obtain fresh environmental clearance in case of change in scope of the project if any.

This issues with the approval of Competent Authority.

22/2/19

(Sharath Kumar Pallerla)
Scientist 'F' / Director

Copy to:-

1. **The Secretary**, Department of Environment, Government of Tamil Nadu, Chennai.
2. **The Additional Principal Chief Conservator of Forests**(C), Ministry of Environment, Forest and Climate Change,Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 34.
3. **The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. **The Chairman**, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai- 600 032, Tamil Nadu.
5. **The Member Secretary**, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
6. **The District Collector**, Virudhunagar District, Tamil Nadu.
7. **Guard File / Record file / Monitoring file.**
8. **MOEF&CC Website.**

22/2/19

(Sharath Kumar Pallerla)
Scientist 'F'/Director