

Government of Maharashtra

SEAC-2011/CR-146/TC2
 Environment department
 Room No. 217, 2nd floor,
 Mantralaya Annexe,
 Mumbai- 400 032.
 Dated: 13th March, 2014

To,
 M/s. Chettinad Cement Corporation Limited.
 9th Floor, Rani Seethai Hall Building,
 603 Anna Salai, Chennai- 600 006.

Subject: Environmental clearance for proposed 2 X 2 MTPA Cement Grinding Unit with Bulk Loading Terminal and 2 X 50 MW at Ahuj (A), Alegaon village, Tal. South Solapur, Distt. Solapur by M/s. Chettinad Cement Corporation Limited.

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification, 2006, by the State Level Expert Appraisal Committee, Maharashtra in its 60th & 72nd meetings and decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 63rd Meeting.

2. It is noted that the proposal is for grant of Environmental Clearance for proposed 2 X 2 MTPA Cement Grinding Unit with Bulk Loading Terminal and 2 X 50 MW at Ahuj (A), Alegaon village, Tal. South Solapur, Dist. Solapur. SEAC considered the project under screening category 3(b) & 1 (d) BI of EIA Notification 2006.

Brief Information of the project submitted by Project Proponent is as:

Name of the Project	Proposed 2 X 2 MTPA Cement Grinding Unit with Bulk Loading Terminal and 2 X 50 MW.
Name of Proponent	M/s. Chettinad Cement Corporation Limited.
Consultant	Anacon Laboratories Pvt. Ltd.
Area Details	<ul style="list-style-type: none"> • Total plot area (sq. m.): 53.49 ha (538900 sq. m.) • Built up area (Sq. m.): 25.39 ha (253900 sq. m.)
Estimated capital cost of the Project(including cost for land, building, plant and machinery separately)	Rs. 660.75crores
Location details of the project	<ul style="list-style-type: none"> • Latitude: 170 31' 28.52" to 170 32' 13.89" • Longitude: 760 02' 5.88" to 760 02' 35.2" • Location: Auj (A), Alegaon Village, South Solapur Taluka, Solapur

	District, Maharashtra State				
	<ul style="list-style-type: none"> Elevation above Mean Sea Level (metres): 457 m to 470 m above MSL 				
Raw materials (including process chemicals, catalysts, & additives).	List of Raw Materials	Physical & Chemical Nature of Raw Materials	Quantity (Tonnes/year) for full production Capacity	Source of Materials	Means of Transportation Source to Storage site with justification
	Clinker	Solid	38,00,000	Chettinad Kallur Plant	Road / Rail
	Gypsum	Soild	2,00,000	Mumbai	
	Fly Ash	Solid-Burnt Watse	12,00,000	NTPC Solapur, Own CPP and nearby PP	Road/ Bulker
	Coal	Solid-Fuel	6,00,000	Imported & Local Source	Road/ Rail
Production details	Name of Products, By-products, Intermediate Products	Existing (T/year)	Proposed Activity (New/Modernisation/Expansion)	Total (T/Year)	
	Portland Pozzolana Cement/Ordinary Portland Cement	NIL	Cement Grinding - New	40,00,000	
	Power	NIL	Power Generation -New	100 mw (per hour)	
Process details /manufacturing details	Cement Grinding – Grinding of Clinker, Gypsum, Fly Ash and Packing Power – Generation of Power using coal as fuel to generate steam for running the turbine				
Rain Water Harvesting (RWH)	Level of the Ground water table- 2.2 m to 9.79 m Size and no of RWH tank(s) and Quantity – 70 x 30 x 2.5 m ³ – 4 numbers , 21000 m ³ Location of the RWH tank(s)- within the plant premises Size, nos of recharge pits and Quantity - 4 numbers. 3m x 3m. 31048 CM/Year Budgetary allocation (Capital cost and O&M cost) Rs 6 lakhs				

Total Water Requirement Storm water drainage	<p>Total water requirement: Fresh water (CMD): 1840 & Source Ground initially and then Bhima River Recycled water (CMD): 655 Use of the water: Process (CMD): 450 for Cement Cooling water (CMD):500 for CPP DM Water (CMD): 660 Dust Suppression (CMD): 60 – Treated Waste Water Reused Drinking (CMD): 50 for Cement & 20 for CPP Green belt (CMD):575 - Treated Waste Water Reused & 100-Fresh Fire service (CMD): 20- Treated Waste Water Reused Others (CMD): 60 -Colony Natural water drainage pattern – Towards SW Quantity of storm water 198459 CM/Year Size of SWD – To be designed later</p>																																							
Sewage generation and Treatment	<p>Amount of sewage generation (CMD) 105 Proposed treatment for the sewage – Sewage Treatment Plant Capacity of the STP (CMD) (If applicable)-200</p>																																							
Effluent characteristic	<table border="1"> <thead> <tr> <th data-bbox="626 772 732 978">Sr. No.</th> <th data-bbox="740 772 927 978">Parameters (pH, BOD, COD, heavy metal, etc)</th> <th data-bbox="935 772 1105 978">Inlet effluent Characteristic in mg/litre except pH</th> <th data-bbox="1114 772 1268 978">Outlet effluent Characteristic</th> <th data-bbox="1276 772 1520 978">Effluent discharge standards (CPCB/MPCB) for onland irrigation</th> </tr> </thead> <tbody> <tr> <td data-bbox="626 982 732 1014">1</td> <td data-bbox="740 982 927 1014">pH</td> <td data-bbox="935 982 1105 1014">5.5 to 9.0</td> <td data-bbox="1114 982 1268 1014">6.0 to 8.5</td> <td data-bbox="1276 982 1520 1014">5.5 to 9.0</td> </tr> <tr> <td data-bbox="626 1018 732 1081">2</td> <td data-bbox="740 1018 927 1081">Suspended Solids</td> <td data-bbox="935 1018 1105 1081">100 to 500</td> <td data-bbox="1114 1018 1268 1081"><100</td> <td data-bbox="1276 1018 1520 1081"><100</td> </tr> <tr> <td data-bbox="626 1085 732 1148">3</td> <td data-bbox="740 1085 927 1148">Oil & Grease</td> <td data-bbox="935 1085 1105 1148">10 to 200</td> <td data-bbox="1114 1085 1268 1148"><10</td> <td data-bbox="1276 1085 1520 1148"><10</td> </tr> <tr> <td data-bbox="626 1152 732 1257">4</td> <td data-bbox="740 1152 927 1257">Total Dissolved Solids</td> <td data-bbox="935 1152 1105 1257">500 to 10000</td> <td data-bbox="1114 1152 1268 1257"><1800</td> <td data-bbox="1276 1152 1520 1257">--</td> </tr> <tr> <td data-bbox="626 1262 732 1293">5</td> <td data-bbox="740 1262 927 1293">BOD</td> <td data-bbox="935 1262 1105 1293">250 to 350</td> <td data-bbox="1114 1262 1268 1293"><100</td> <td data-bbox="1276 1262 1520 1293">100</td> </tr> <tr> <td data-bbox="626 1297 732 1329">6</td> <td data-bbox="740 1297 927 1329">COD</td> <td data-bbox="935 1297 1105 1329">450 to 600</td> <td data-bbox="1114 1297 1268 1329"><250</td> <td data-bbox="1276 1297 1520 1329">-</td> </tr> </tbody> </table>	Sr. No.	Parameters (pH, BOD, COD, heavy metal, etc)	Inlet effluent Characteristic in mg/litre except pH	Outlet effluent Characteristic	Effluent discharge standards (CPCB/MPCB) for onland irrigation	1	pH	5.5 to 9.0	6.0 to 8.5	5.5 to 9.0	2	Suspended Solids	100 to 500	<100	<100	3	Oil & Grease	10 to 200	<10	<10	4	Total Dissolved Solids	500 to 10000	<1800	--	5	BOD	250 to 350	<100	100	6	COD	450 to 600	<250	-				
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ETP details	<p>Amount of effluent generation (CMD) - 550 Capacity of the ETP (CMD)-550 Amount of treated effluent recycled (CMD): 550 Amount of water send to the CETP (CMD):NIL</p>																																							
Note on ETP technology to be used	<p>ETP will consist of Neutralisation Tank, Clariflocculator, Pressure Filter, Softener</p>																																							
Disposal of the ETP sludge (If applicable)	<p>As per guidelines</p>																																							
Solid waste Management	<table border="1"> <thead> <tr> <th data-bbox="626 1614 667 1709">Sr. No</th> <th data-bbox="675 1614 764 1709">Source</th> <th data-bbox="773 1614 829 1709">Qty (TPM)</th> <th data-bbox="837 1614 927 1709">Form (Sludge / Dry / Slurry etc.)</th> <th data-bbox="935 1614 1024 1709">Composition</th> </tr> </thead> <tbody> <tr> <td data-bbox="626 1713 667 1745">2</td> <td data-bbox="675 1713 764 1745">ETP</td> <td data-bbox="773 1713 829 1745">to be ascertained</td> <td data-bbox="837 1713 927 1745"></td> <td data-bbox="935 1713 1024 1745"></td> </tr> <tr> <td data-bbox="626 1749 667 1780">3</td> <td data-bbox="675 1749 764 1780">Process</td> <td data-bbox="773 1749 829 1780">11334 (Ash)</td> <td data-bbox="837 1749 927 1780">Solid</td> <td data-bbox="935 1749 1024 1780">-</td> </tr> </tbody> </table> <p>If waste(s) contain any hazardous/toxic substance/radioactive materials or heavy metals then provide quantity, disposal data and proposed precautionary measures. Used oil , a hazardous waste material will be sent to authorised recyclers</p>					Sr. No	Source	Qty (TPM)	Form (Sludge / Dry / Slurry etc.)	Composition	2	ETP	to be ascertained			3	Process	11334 (Ash)	Solid	-																				
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	Fly Ash from CPP will be used for Cement manufacturing and Bottom Ash as Bed Material and for landfill Possible users of solid waste Own Consumption only					
Atmospheric Emissions (Flue gas characteristics SPM, SO ₂ , NO _x , CO, etc.)	Sr. No	Pollutant	Source of Emission	Emission rate (kg/hr)	Concentration in flue gas (α/m)	
	1	SPM	Cement Mills (4) Packing Unit (4) CPP (1) DG Set (2)	4 x 21.6 4 x 0.86 1 x 19.84 -	0.05 0.05 0.05 -	
	2	SO ₂	CPP	793	2.0	
	3	NO _x	CPP	626	1.58	
	4	CO	-	-	-	
	5	Others	-	-	-	
Stack emission Details: (All the stacks attached to process units, Boilers, captive power plant, D.G. Sets, Incinerator both for existing and proposed activity). Please indicate the specific section to which the stack is attached e.g.: Process section, D.G Set, Boiler, Power Plant, Incinerator etc. Emission rate (kg/hr.) for each pollutant (SPM, SO ₂ , NO _x etc. should be specified	Plant Section & units	Stack No.	Height from ground level (m)	Internal Diameter (Top)(m)	Emission Rate (kg/hr)	Temp. of Exhaust Gases
	Cement Mill	1-4	70	3.6	SPM 21.6	100
	Packing Unit	5-8	22	0.87 x 0.61	SPM 0.86	50
	CPP	9	130	3.6	SPM- 19.84 SO ₂ - 793 NO _x - 626	140
	DG Set	10-11	12	0.36	-	-
Emission Standards	Pollutant	Emission Standard Limit (mg/Nm³)	Proposed Limit (mg/Nm³)	MPCB Consent (mg/Nm³)		
	SPM	50	50	To be issued		
Ambient Air Quality Data	Pollutant	Permissible Standard	Proposed Concentration (in µg/m)	Remarks		
	RPM (PM ₁₀)	100	67.67	Including impact of new industries		

	SO ₂	80	58.93	NTPC, Zuari & Chettinad) coming up		
	NO _x	80	66.15	NTPC, Zuari & Chettinad) coming up		
Details of Fuel to be used:	Fuel	Daily Consumption (TPD/KLD)		Calorific value(Kcals /kg)	%Ash	%Sulphur
		Existing	Proposed			
	HSD		Only for CPP Start up			
	Coal		Indigenous Coal-501 Imported Coal-1169	3200-3500 5200	30 – 45 12 max	0.2 – 0.5 0.6 max
	<ul style="list-style-type: none"> • Source of fuel:70% Imported Coal30% Indigenous Coal from open market • Mode of transportation of fuel to site: Road/Rail 					
Energy	<p>Power supply:</p> <ul style="list-style-type: none"> • Proposed power requirement: (34 MW) • Number and capacity DG sets to be used (existing and proposed) Proposed DG Set 2 x 1000 kva <p>Details of the non-conventional renewable energy proposed to be used : Feasibility will be looked into.</p>					
Green Belt Development	<ul style="list-style-type: none"> •Green belt area (Sq. m.):1,80,000 •Number and species of trees to be planted:9000/ year for first 5yrs 					

Details of Pollution Control Systems:	Sr.No.	Existing pollution Control system	Proposed to be installed
	1.	Air	Bag Filters, ESP & Stack, Water Sprinkling
	2.	Water	ETP, STP
	3.	Noise	Enclosures, Silencers
	4.	Solid waste	Fly Ash-Will be used for Cement manufacturing Bottom Ash – for Boiler Bed Material and landfill purposes STP Sludge-as manure
Environmental Management plan Budgetary Allocation	<ul style="list-style-type: none"> • Capital cost (With break up): • O&M cost (With break up): 		
	Sr. No.	Recurring Cost per annum	Capital Cost (Rs lakhs)
1	Air Pollution Control	25	350
2	Water Pollution Control }	5	75
3	Noise Pollution Control }		
4	Environment Monitoring and Management	15	50
5	Reclamation borrow/mined area (If applicable)		
6	Occupational Health		
7	Green Belt	5	50
8	Solid waste management		
9	Others (Pl. Specify)		
	Total	50	525

38. Storage of Chemicals (Inflammable/Explosive/Hazardous/Toxic Substances)

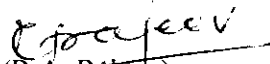
S.No	Name	Number of Storages	Physical & Chemical Composition	Consumption (in TPD)	Maximum Quantity Storage at any point of time	Source of Supply	Mode of Transportation
1	Diesel	One	Liquid	Only for start up of Power Plant and not for regular use	250 litres	Nearby Oil Bunk	Truck/Tractor in Barrel

3. The proposal has been considered by SEIAA in its 63rd meeting decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions :

- (i) No additional land shall be used /acquired for any activity of the project without obtaining proper permission.
- (ii) Conditions stipulated by Central Ground Water Authority vide letter dated 14.01.2014 regarding ground water withdrawal should be followed strictly.
- (iii) Status regarding captive brick manufacturing plant to utilize the bottom Ash should be furnished.
- (iv) For controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured.
- (v) Regular monitoring of the air quality, including SPM & SO₂ levels both in work zone and ambient air shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharashtra Pollution Control Board (MPCB) & submit report accordingly to MPCB.
- (vi) Necessary arrangement shall be made to adequate safety and ventilation arrangement in furnace area.
- (vii) Proper Housekeeping programmes shall be implemented.
- (viii) In the event of the failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.
- (ix) A stack of adequate height based on DG set capacity shall be provided for control and dispersion of pollutant from DG set.(If applicable)
- (x) A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water.
- (xi) Arrangement shall be made that effluent and storm water does not get mixed.
- (xii) Periodic monitoring of ground water shall be undertaken and results analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the Maharashtra Pollution Control Board.
- (xiii) Leq of Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like earplugs etc. shall be provided.
- (xiv) The overall noise levels in and around the plant are shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989.
- (xv) Green belt shall be developed & maintained around the plant periphery. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
- (xvi) Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places for early detection and warning.
- (xvii) Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per Factories Act.
- (xviii) The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- (xix) The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Waste (Management and Handling) Rules, 2003 (amended). Authorization from the MPCB shall be obtained for collections/treatment/storage/disposal of hazardous wastes.
- (xx) The company shall undertake following Waste Minimization Measures :
 - Metering of quantities of active ingredients to minimize waste.

- Reuse of by- products from the process as raw materials or as raw material substitutes in other process.
 - Maximizing Recoveries.
 - Use of automated material transfer system to minimize spillage.
- (xxi) Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes / improvements required, if any, in the on-site management plan shall be ensured.
- (xxii) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
- (xxiii) Transportation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.
- (xxiv) Separate silos will be provided for collecting and storing bottom ash and fly ash.
- (xxv) Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department
- (xxvi) The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at <http://ec.maharashtra.gov.in>
- (xxvii) Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1st June & 1st December of each calendar year.
- (xxviii) A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation 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.
- (xxix) The proponent shall upload the status of compliance of the stipulated EC 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 MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely: SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- (xxx) Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.
- (xxxi) A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB
- (xxxii) The environmental clearance is being issued without prejudice to the court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him.

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.
5. The Environment department reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
6. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 5 years to start of production operations.
7. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.
9. Any appeal against this environmental clearance shall lie with the National Green Tribunal , Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Dehli – 110 022, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010


(R.A. Rajeev)
Principal Secretary,
Environment department &
MS, SEIAA

Copy to:

1. Shri. R. C. Joshi, IAS (Retd.), Chairman, SEIAA, Flat No. 26, Belvedere, Bhulabhai desai road, Breach candy, Mumbai- 400026.
2. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.
3. The CCF, Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016). (MP).
4. Regional Office, MPCB, Pune.
5. Commissioner, Solapur Municipal Corporation, Solapur.

6. Collector, Solapur.
7. IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.
8. Director (TC-1), Dy. Secretary (TC-2), Scientist-1, Environment department.
9. Select file (TC-3).

(EC Uploaded on 15 March, 2014)