

Certified copy of Compliance Report

Date of Monitoring: 23.12.2014

Sub: Expansion by addition of 1x25 MW imported Coal Based Captive Power Plant of M/s. Madras Cements Ltd. At village Thammanayakkanpatti, in Virudhunagar Taluk, in Virudhunagar Dist, in Tamil Nadu.

Ref: J-13012/112/2011-IA.II (T) dated 6.2.2012

Specific Conditions

Sl.No	Condition	Compliance.
1	Scheme for implementation for harnessing solar power within the premises of the plant particularly at available roof tops shall be formulated and status of implementation shall be submitted to the Regional Office, of the Ministry from time to time.	They are in the process of implementing the installation of solar power within the premises of the plant particularly at available roof tops. 72 No's of solar lights has been installed in the colony premises and nearby Villages. They have agreed to inform the status of implementation to the Regional Office, of the Ministry from time to time.
2	In case source of fuel supply is to be changed at a latter stage (now proposed to use imported coal) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change. In such a case the necessity for re-conducting public hearing may be decided by the Ministry in consultation with the Expert Appraisal Committee.	Agreed to comply
3	Coal transportation to plant site shall be undertaken to the project site through covered trucks.	The coal transportation to the plant site is done by covered trucks only.
4	The project proponent shall carry out a long term R&D on Boiler efficiency vis-a-vis large variation on ash content of coal and submit its findings to the Ministry at a later stage.	As informed that they are using imported coal for TPP which does not have much variation in coal ash. Further informed that the R&D on Boiler efficiency vis-a-vis large variation on ash content of coal would be studied and findings would be submitted to the Ministry at a later stage.
5	A stack of 82 m height with flue gas velocity not less than 22 m/s shall be installed and provided with continuous online monitoring equipments for SO ₂ , NO _x and PM _{2.5} & PM ₁₀ . Mercury emissions from stack may also monitored on periodic basis.	A stack of 82 m height with flue gas velocity not less than 22 m/s has been installed and the same has been provided with continuous online monitoring equipments for PM _{2.5} & PM ₁₀ . Mercury emissions from stack also monitored on periodic basis.
6	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	High Efficiency Electro Static Precipitator has been installed and the emission levels did not exceed 50


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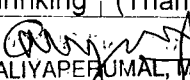
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		mg/Nm ³ as per the reports. Continuous online monitoring equipment has been provided and connected to Care Air Centre, TNPCB, Chennai.
7	Adequate dust extraction system such as cyclones / bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Dust extraction system like cyclones / bag filters and water spray system in coal handling and ash handling points, transfer areas and other vulnerable dusty areas has been provided. Coal is stored in covered shed.
8	Utilization of 100% Fly Ash generated shall be made from 4 th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time. Fly ash shall not be used for agricultural purpose.	100% Fly ash generated is utilized in cement plant for manufacturing PPC cement. Agreed to inform the status of implementation to the Regional Office of the Ministry from time to time. They have assured that the fly ash will not be used for agricultural purpose.
9	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (as, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	Fly Ash is being collected in dry form and concrete silos has been provided for storage facilities. The dry fly ash is utilized 100% for cement manufacturing and hence there is no need for disposal of ash in ash pond in the form of slurry. Finally no ash is disposed off in low laying area.
10	Ash pond shall be lined with HDP/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implement to protect the ash dyke from getting breached. Ash pond water shall be re-circulated and utilized.	Ash pond is not required since they are utilizing the entire fly ash for cement manufacturing. Dry fly ash is stored in concrete silos.
11	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 34% respectively at any given time. In case of variation of coal quality at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.	They assured that the sulphur and ash contents in the coal used in the project does not exceed 0.5% and 34% respectively at any given time. Further they have agreed to inform the Ministry in case of variation of coal quality at any point of time and obtain suitable amendments to environmental clearance condition wherever necessary.
12	Existing de-generated water bodies (if any) within 5.0 Km area shall be regenerated at the project proponent's expenses in consultation with the State Govt.	There is no de-generated water bodies existing within 5 kms area as informed.
13	No ground water shall be extracted for use in operation of the power plant even in lean season.	They assured not to draw ground water even in lean season.
14	No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the	They assured not to disturb any water bodies (including natural drainage system) in the area due to activities

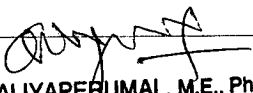
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	power plant.	associated with the setting up / operation of the power plant. The power plant is located within the project premises and the existing cement plant was started in the way back of 1959 and commissioned in 1962
15	COC of 5.0 shall be adopted.	COC of 5 is being adopted
16	Regular monitoring of ground water level shall be carried out establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Regular monitoring of ground water level is being carried out after establishing a network of existing wells and constructing new piezometers. There is no requirement of Ash pond since all the ash generated is utilized in dry form in the cement plant. One number of piezometers has been installed. The levels are measured hourly basis and readings recorded twice a day.
17	Monitoring surface water quality in the area shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Season wise monitoring of surface water quality is being carried out and records are maintained and agreed submit the data to the Ministry regularly. Apart from this monitoring of the same between the plant and drainage in the direction of flow of ground water is also carried and records are maintained. Monitoring for heavy metals in ground water has not been monitored and agreed to monitor and submit the reports.
18	Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB.	The DM Plant reject is mixed with water and sent to cement plant for equipment cooling. No other waste water is generated and discharged outside
19	The project proponent shall undertake rain water harvesting measures and shall develop water storage for use in operation of the plant. Rain water harvesting system shall be put in place which shall comprise of rain water collection from the built up and open area in the plant premises. Action plan for implementation shall be submitted to the Regional Office of the Ministry within six months.	Four numbers of rain water harvesting ponds has been constructed in the plant premises for harvesting the rain water. Action plan for implementation of rainwater harvesting was submitted to the Regional Office of the Ministry within six months.
20	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Additional soil for leveling of the proposed site is generated within the sites.
21	At least three nearest village shall be adopted and basic amenities like development of roads, drinking	Three nearest villages (Thammanaykenpatti, Thulukkapatty


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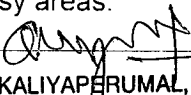
	water supply, primary health centre, primary school etc., shall be developed in co-ordination with the district administration.	& Vechakarapatti) has been adopted by the company and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc., has also been developed in co-ordination with the district administration as informed.
22	The project proponent shall also adequately contribute in the development of the neighbouring villages, special package with implementation schedule for providing potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Three numbers of RO plants have been installed in the neighboring villages, for providing potable drinking water supply in the nearby villages as informed.
23	CSR scheme shall be undertaken based on need based assessment in and around the villages within 5.0 Km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR employment of local youth after imparting relevant training as may be necessary shall be undertaken as committed.	The project authorities informed that CSR scheme is being undertaken based on need based assessment in and around the villages within 5.0 Km of the site and in constant consultation with the village Panchayat and the District Administration. Further informed that as part of CSR, employment of local youth after imparting relevant training is undertaken as committed.
24	An amount of Rs.1.0 crores shall be earmarked as one time capital cost for CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs.0.2 crores per annum till the life of the plant shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within six months along with road map for implementation.	As gathered that an amount of Rs. 2.0 crores for three years was allocated in consultation with the District administration and local villagers for CSR activities. Further an amount of Rs. 0.2 crores is being incurred per annum as recurring expenditure. As stated above action plan was prepared and submitted to the Ministry within six month.
25	It shall be ensured that an in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website.	The CSR schemes identified are monitored by the Panchayats and the district administration from time to time as decided during public hearing as informed but not got done from the nearest government institute of repute in the region. The statuses of implementation of the scheme from time to time are submitted. The company's CSR activities has been upload on company's website.
26	Green Belt consisting of 3 tiers of plantations of native species around plant and 20 m width shall be raised. The density of trees shall not less than 2500 per ha with survival rate not less than 80%.	Green Belt consisting of 3 tiers of plantations of native species around plant and 20 m width has been raised. The density of trees are 2500 per ha and the survival rate is more than 80%. Lot of vacant area is available and they were directed to take up plantation.


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27	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.	An Environmental Cell is created which is headed by a senior officer and he reports directly to the Head of the Organization.
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General Conditions

Sl.No	Condition	Compliance
(i)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	There is no effluent generation.
(ii)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation.	Sewage treatment plant is installed and the treated sewage is used for green belt development.
(iii)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Safety measures, Fire hydrant line are provided in plant and coal yard. Apart from this water spraying arrangement is also made and regular monitoring is also being done. A copy of the measures details was submitted to the Ministry's RO.
(iv)	Storage facilities for auxiliary liquid fuel such as LDO / HFO / LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Storage facilities for auxiliary liquid fuel such as LDO / HFO / LSHS are available and they have obtained Explosive License from Department of Explosives, Nagpur and as informed that sulphur content in the liquid fuel was not exceed 0.5%. Disaster Management Plan has been prepared to meet any eventuality in case of an accident taking place due to storage of oil and regular mock drill also has been conducted.
(v)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	As informed that first aid and sanitation arrangements were made for the drivers and other contract workers during construction phase.
(vi)	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.	As informed that the turbine's noise are below the TNPCB's limit and to the people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. are provided and they are using. Further workers engaged in noisy areas such as turbine area, air compressors etc periodical medical examination has been conducted and record is maintained. The power plant was commissioned 01.06.2012 and agreed to give /take treatment for any hearing loss including shifting to non noisy/less noisy areas.


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(vii)	Regular monitoring of ambient air ground level concentration of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the Company.	Monitoring of ambient air quality (SO ₂ , NO _x , PM _{2.5} & PM ₁₀ and Hg) is being carried out through external agency in the impact zone and records are maintained. Agreed to take corrective measures if at any stage these levels are found to exceed the prescribed limits immediately. The location of the monitoring stations and frequency of monitoring are decided in consultation with SPCB. Periodic reports are submitted to the Regional Office of this Ministry. The data also uploaded on the website of the Company.
(viii)	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to removed after the completion of the project.	Complied with.
(ix)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality within seven days from the date of this clearance letter, information that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in	The advertisement was published in two local newspapers in Tamil and English.
(x)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	As informed that a copy of the clearance letter was sent to concerned Panchayat.
(xi)	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously by sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Criteria pollutant levels namely; SPM, RSPM (PM _{2.5} & PM ₁₀), SO ₂ , NO _x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	The Online stack monitoring system provided, and the same is connected to Care Air Centre, Chennai. The electronic display board kept at the main gate of the company in the Public domain. The stipulated environmental clearance conditions, including results of monitored data are uploaded on their website


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(xii)	<p>The environment statement for each financial year ending 31st 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 also 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 respective Regional Offices of the Ministry by e-mail.</p>	<p>The project authorities informed that Form-V was submitted to TNPCB, Chennai. Uploading monitored data on the company's website is in progress.</p>
(xiii)	<p>The project proponent shall submit six monthly reports on the status of implementation of the stipulated environmental safeguards to the Ministry of Environment and Forest, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.</p>	<p>Six monthly compliance report is submitted to MoEF, RO regularly and the compliance report was uploaded on their website.</p>
(xiv)	<p>Regional Office, Ministry of Environment and Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environmental Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and update the same from time to time at least six monthly basis. Criteria Pollutants levels including NO_x (from stack & ambient air) shall be displayed at the main gate of the Power Plant.</p>	<p>A complete set of documents including Environmental Impact Assessment Report and Environmental Management Plan along with the additional information submitted from time to time were forwarded to the Regional Office The Online stack monitoring system is provided, and the same is connected to Care Air Centre, Chennai. The electronic display board kept at the main gate of the company in the Public domain. The compliance status report has been uploaded on their website and as informed the same has been updated from time to time.</p>
(xv)	<p>Separate funds shall be allocated for implementation of environmental protection measures along with item-wise breakup. 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 be reported to the Ministry.</p>	<p>Adequate fund has been allocated for implementation of environmental protection measures and the allocated fund is especially used only for Environment Management purpose and also not diverted for any other purpose as informed.</p>


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(xvi)	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	They used internal fund for this plant and hence the financial closure details did not arise.
(xvii)	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Offices of the Ministry / CPCB /SPCB who would be monitoring the compliance of environmental status.	The project authorities have extended full cooperation during the visit.


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