

GMR Chhattisgarh Energy Limited, Village - Raikheda, Gaitra and Chicholi in Block-Tilda, Distt-Raipur, Chhattisgarh		
Compliance Status of 1370 (2X685) MW Thermal Power Plant		
Environmental Clearance letter no.: J-13012/62/2008-IA.II (T) GOI, MoEF		
Period of Compliance: 10/05/11 to 09/11/11		
SN	Condition	Compliance Status
i	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six months	Vision document specifying prospective plan for site is enclosed as Annex-I
ii	In case source of fuel supply now proposed to be run on imported coal from South Africa for running the power plant is proposed to be changed to domestic coal at a later stage, the project proponent shall apply for such a change in environmental clearance along with necessary documents as required under EIA notification, 2006 (and its amendments). In such a case the necessity for holding public hearing again or otherwise will be determined by the Ministry in consultation with the Expert Appraisal Committee (Thermal Power).	Agreed, will be complied.
iii	Provision for installation of FGD shall be provided for future use.	Complied, Space provision for FGD envisaged in layout.
iv	Stack of 275 m height shall be installed and provided with continuous online monitoring equipments for SO _x , NO _x and PM _{2.5} & PM ₁₀ . Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis.	Stack Height of 275 mtr with continuous emission monitoring system (CEMS) is envisaged for Plant design and execution with exit velocity of 25m/sec. Mercury emission from stack will be monitored on periodic basis during the operation.
v	High Efficiency Electrostatic Precipitators (ESPs) shall be installed followed by installation of Bag Filter and it shall be ensured that particulate emission does not exceed 50 mg/Nm ³	An ESP of high efficiency i.e. 99.95% shall be installed ensuring particulate emission level < 50 mg/Nm ³ with one field out and high inlet dust loading of 99 g/nm ³ . The technology and ESP is bought from M/s Lodge Cotrell, South Korea which is technologically superior to Bag filter technology. The details of Comparison and about the technology is attached as Annex.-II
vi	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	Complied; Already part of our contract specification.
vii	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 point of time fresh reference shall be made to MOEF for suitable amendments to environmental clearance condition wherever necessary	Agreed and will be complied during operation.
viii	Transport of coal to the plant site shall be strictly by rail. The project proponent shall therefore immediately take up the matter with the Railways. Status of implementation shall be submitted to the Regional Office of the Ministry from time to time.	"Railway Transport Clearance" approval from Railway Authorities granted for the transportation of coal. The status of implementation shall be submitted to RO,MOEF time to time.
ix	Existing de-generated water bodies (if any) within 5.0 Km of the site shall be regenerated at the project proponent's expenses in consultation with the state govt.	Will be complied.

SN	Condition	Compliance Status
x	The proponent shall sponsor a detailed study regarding water availability in Mahanadi River for all competing sources such as drinking, agriculture, industrial, minimum flow of water in the river during the lean season etc through institutions like IIT, Delhi/IIT, Roorkee. The draft terms of reference shall be submitted within three months which shall be finalized by the Expert Appraisal Committee. The preliminary report on the above study shall be submitted within one year.	Please refer our letter No. GMR/MOEF/GEL/2011-12/154 dated 27/06/2011 attached as Annexure-III seeking the details of TOR.
xi	The project proponent shall undertake proactive water harvesting measures and water storage for a larger period not less than 30 days storage shall be developed. The rain water harvesting system shall be put in place before commissioning of the plant. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology/design within a period of three months from the date of this clearance and details shall be furnished. The design of rain water harvesting shall comprise of rain water collection from the built up and open area in the plant premises. Action plan and road map for implementation shall be submitted to the Ministry within six months.	30 days water storage is envisaged. CGWA had been consulted for the finalization of rainwater harvesting technology/design. Please refer our letter No GMR/CTPP/CWB/2011-12/192 dated 04/11/2011 attached as Annexure-IV. Draft report as rainwater harvesting scheme; report covering the action plan and road map is attached herewith as Annexure-IV ; The same is submitted to CGWA for its approval.
xii	Hydrogeology of the in and around the project area shall be reviewed annually from an institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case and deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	Agreed and will be complied.
xiii	No ground water shall be extracted for use in operation of the power plant even in lean season	Will be complied
xiv	No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	Will be complied
xv	Water requirement shall be optimized to around 32 MCM and shall accordingly adopt higher COC of at least not less than 5.0.	Will be complied to the best extent possible.
xvi	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.	Will be complied
xvii	Regular monitoring of ground water level shall be carried out by 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	Will be complied

SN	Condition	Compliance Status
xviii	Monitoring surface water quality in the region 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.	Will be complied.
xix	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	Will be complied.
xx	The project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time	Will be complied.
xxi	Utilisation of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Will be complied
xxii	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.	Will be complied
xxiii	Ash pond shall be lined with HDPE/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 implemented to protect the ash dyke from getting breached.	Will be complied.
xxiv	For disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) shall be done after obtaining due permission from DGMS and after ensuring that the bottom and sides of the mined out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity	Will be complied.
xxv	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 75 m width shall be raised. Tree density shall not less than 2500 per ha with survival rate not less than 80 %.	Will be complied.
xxvi	Atleast three nearest village shall be adopted and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc shall be developed in co-ordination with the district administration	GMR Varalakshmi Foundation (CSR arm of GMR group) initiated community services in three project affected villages namely Raikheda, Chicholi & Gaitera in June, 2009. The annual report of 2010-11 and half yearly progress report of 2011-12 is enclosed. Please refer Annexure-V

SN	Condition	Compliance Status															
xxvii	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	Currently GMRVF is working in three directly project affected villages. We have planned to start entry point activities in village Mura located on south eastern boundary of the proposed plant from April, 2012. <table border="1"> <thead> <tr> <th>S.N.</th> <th>Name of Village</th> <th>Start Day/Year</th> </tr> </thead> <tbody> <tr> <td colspan="3">Project Affected Villages</td> </tr> <tr> <td>1</td> <td>Raikheda</td> <td>June, 2009</td> </tr> <tr> <td>2</td> <td>Gaitra</td> <td>August, 2009</td> </tr> <tr> <td>3</td> <td>Chicholi</td> <td>Nov' 2009</td> </tr> </tbody> </table>	S.N.	Name of Village	Start Day/Year	Project Affected Villages			1	Raikheda	June, 2009	2	Gaitra	August, 2009	3	Chicholi	Nov' 2009
S.N.	Name of Village	Start Day/Year															
Project Affected Villages																	
1	Raikheda	June, 2009															
2	Gaitra	August, 2009															
3	Chicholi	Nov' 2009															
xxviii	A time bound implementation of the CSR shall be formulated within six months and submitted to the Ministry. While identifying CSR activities it shall be ensured that need based assessment for the nearby villages within study area shall be conducted to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people shall be undertaken. Development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. Vocational training programme for possible self employment and jobs shall be imparted to identified villagers free of cost.	Report on socio-economic development has been prepared and CSR activities are identified by social work professionals employed exclusively for CSR through GMR Varalakshmi Foundation in consultation with communities and their representatives (Please refer Annual Report 2010-11 & half yearly progress report). Poorest of the poor families are identified basing village panchayat statistics and special interventions have been planned for their upliftment. Separate budget has been allocated for community development activities and vocational trainings (please refer Annexure-VI)															
xxix	An amount of Rs 33.16 Crores shall be earmarked as one time capital cost for CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs 6.63 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within six month along with road map for implementation.	Time bound implementation of CSR activities with budget of Rs.33.16 Crores is enclosed as Annexure-VI															
xxx	It shall be ensured that in-built monitoring mechanism for the 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	It is proposed that proponent will submit annual progress reports to the MoEF and would get the social audit done from reputed academic/social institutions recognized by Government of Chhattisgarh.															
B - General Conditions																	
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.	Will be complied															
ii	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	Will be complied															
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.	Will be complied															

SN	Condition	Compliance Status
iv	Storage facilities for auxiliary liquid fuel such as LDO and/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.	Will be complied
v	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase	Will be complied
vi	Noise levels emanating for turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dBA from the source. For people working in the high noise area, requisite personal protective equipment like ear plugs/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.	Will be complied
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.	Will be complied
viii	Provision shall be made for the housing of construction labor (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 be removed after completion of the project.	Complied. Following facilities such as housing, drinking water, toilets, soak pits, lighting, fuels for cooking, bathing platform are being provided.
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 Quality concerned within seven days from the date of this clearance letter, informing 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	Complied; copy attached as Annex.-VII
x	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations. If any, receive while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied; copy attached as Annex.-VIII

SN	Condition	Compliance Status
xi	An Environmental Cell comprising of at least one expert in environmental science / engineering, occupational health and social scientist, shall be created at the project site itself and shall be headed by an officer of appropriate superiority and qualification it shall be ensured that the Head the Cell shall directly report to the head of the organization and he shall be held responsible for implementation of environmental regulations and social impact improvement/mitigation measures	Complied; an organisation chart is attached as Annexure - IX
xii	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 be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely SPM, RSPM (PM2.5 & PM10), SO2, NOX (ambient levels as well as stack emissions) shall display at a convenient location near the main gate of the company in the public domain.	Will be complied.
xiii	The environment statement for each financial year ending 31 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 at the Ministry by e-mail.	Will be complied.
xiv	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of environment and Forests, 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.	Will be complied.
xv	Regional Office of the Ministry of Environment forests will monitor the implementation of the stipulated conditions. A complete set of documents including environmental impact Assessment Report and Environment 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 NOX (from stack & ambient air) shall be displayed at the main gate of the power plant.	Shall be complied
xvi	Separate funds shall be allocated for implementation of environmental, protection measures along with item-wise break-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 be reported to the Ministry.	Will be complied

SN	Condition	Compliance Status
xvii	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 date of start of land development work a commissioning of plant.	Financial Closure granted On 10th Dec'10. 13th June'11. The Project development started after receiving Consent to establish.
xviii	Full cooperation shall be extended to the Scientists/Officers from the Ministry Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.	Agreed and will be complied.