



## STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, (SEIAA), ORISSA.

(Constituted vide order No. S.O. 2674 (E) Date 17<sup>th</sup> Nov. 2008 of Ministry of Environment & Forest, Govt. of India, Under Environment Protection Act, 1986.) Qr. No. 5RF-2/1, Unit-IX, Bhubaneswar-751022  
[E-mail-seiaaorissa@gmail.com](mailto:E-mail-seiaaorissa@gmail.com), Website - [www.orissaseiaa.gov.in](http://www.orissaseiaa.gov.in)

Ref. No. \_\_\_\_\_

Dt. \_\_\_\_\_

**SEIAA – 86/11**

From

Bhagirathi Behera, IFS  
Director, Environment-cum-  
Spl. Secretary to Government  
& Member Secretary, SEIAA, Orissa

To

Sri Vineet Saraf, Director  
M/s FACOR Power Ltd.  
DP Nagar, Randia,  
Dist-Bhadrak-756135  
Tel-06784-219052  
Fax-06784-240803  
[E-mail-fplbdk@facorgroup.in](mailto:E-mail-fplbdk@facorgroup.in)

Sub: Environmental Clearance for expansion of C.P.P from 45 MW to 100 MW of M/s FACOR Power Ltd. at Randia in the district of Bhadrak.

Sir,

This has reference to your letter no. FPL/BDK/SPCB/455/09-10 dated 28.11.2009 along with application for Terms of Reference (ToR) and subsequent application vide letter no. FPL/BDK/SEIAA/516/09-10 dated 22.01.2010, no. FPL/BDK/SEIAA/551/09-10 dated 04.03.2011, no. FPL/DEL/GEOMIN/SEIAA/09-10/640 dated 11.03.2010, no. FPL/BDK/SPCB/954/10-11 dated 10.02.2011, no. FPL/BDK/SPCB/987/10-11 dated 07.03.2011, no. FPL/BDK/1125/11-12 dated 16.06.2011, no. FPL/BDK//1180-1/11-12 dated 09.08.2011 and no. FPL/BDK/SEAC/1236/11-12 dated 10.09.2011 on the above mentioned subject, I am directed to say that the State Environment Impact Assessment Authority, Orissa have considered the application for the proposal for expansion of CPP from 45 MW to 100 MW at Randia, in the district of Bhadrak of M/s FACOR Power Ltd. The proponent received environmental clearance for their earlier application for 45 MW from MoEF, Govt. of India on 2009. The present proposal for installation of 55 MW CPP to enhancement the total capacity of CPP to 100 MW. The SEAC issued ToR for the expansion proposal vide letter no. 402 dated 21.07.2010 and amended ToR issued vide letter no. 687 dated 03.12.2010. The proposed power plant will be fuelled by 'F' grade and 'G' grade coal obtained from Mahanadi Coal Field Ltd. (MCL), preferably from Talcher region. The estimated coal requirement will be 600 thousand tonnes per year for the final capacity of 100 MW after expansion. The project based on Circulating Fluidized Bed Combustion (CFBC). Public hearing was conducted on 04.09.2011. Linkage for additional amount of coal with MCL is in process. For the time being the

coal demand shall be met from import Indonesian coal. Necessary MOU and agreement has been signed between Global Dwimudra Indonesia and FACOR Power Ltd. Permission for drawl of additional 300 cum/hr of water from Salandi river is under process from water resources Dept. Govt. of Orissa. There is marginal impact due to withdrawal of only 9500 KLD of water from Salandi river for 100 MW. Permission already obtained from state water resources for withdrawal of 1.8 cusec or 4320 KLD of water. Zero discharge of effluent will not effect any nearby water bodies or sources of public use. Effluents from individual units will be collected separately and recycled back to the system. Fly ash generated from ESP is conveyed to Ash Silo pneumatically and stored in Ash silo prior to transport to Ash Mound. The ash is transported in a tarpaulin covered truck to ash mound. FACOR has acquired around 9.8 ha. of land for temporary ash mound area fly ash will be taken out by outside agencies for cement manufacturing and export purposes. The unloading of ash from the Silo is done through Ash conditioner unit where ash is conditioned with water containing 15-20% of moisture leaving no ash particles to be air borne. M/s FACOR Power Ltd. have arrangements with M/s OCL India Ltd. (vide letter issued dated 19.02.2011) for ash disposal and Trileaf Exports Ltd. (vide agreement dated 26.03.2011 for ash disposal) Part of the bottom ash generated from boilers will be recycled and reused back in the boilers as bed materials 530 t/d of ash will be generated with G-grade coal, out of which 15% will be bottom ash i.e. 80 t/day and 450 t/day will be fly ash. The proposal was placed in the SEAC meeting held on 10<sup>th</sup> and 11<sup>th</sup> August 2011. The consultant M/s Geomin Consultants Pvt. Ltd. 267, Kharavel Nagar, Bhubaneswar made a detailed presentation on the proposal. The committee decided to consider the proposal after receipt of certain information/document/clarification from the proponent. The proponent furnished the information/document/clarification and the committee verified the same.

Based on the information / documents and clarifications furnished by the proponent and on recommendation of SEAC, Orissa, the State Environment Impact Assessment Authority, Orissa hereby accords Environmental Clearance in favour of the project for a period of 5 (five) years under the provisions of the Environment Impact Assessment Notification, 2006 and 2009 and subsequent amendment thereto under various MoEF, Govt. of India circulars thereunder and subject to the following stipulated conditions.

#### **Stipulated Conditions:**

- 1) The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Gorm-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
- 2) The applicant will take necessary steps for socio economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc. after a detailed primary socio-economic survey.
- 3) The applicant will comply to the points, concerns and issues raised by the people during public hearing on 24.02.2011 in accordance with the commitments made by him thereon.
- 4) The applicant will take statutory clearance /approval /permissions from the concerned authorities in respect of his project as and when required.
- 5) For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.

- 6) High efficiency electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm<sup>3</sup>.
- 7) Excess water along with storm water during monsoon should not be discharged into the surrounding low lying area. The storm water during monsoon will be collected in a pond and after appropriate treatment shall be stored in a reservoir for use in plantation, dust suppression etc.
- 8) Under no circumstances the process water shall be discharged to nearby water body. It should be properly treated, stored and 100% recycled in the process.
- 9) The proponent shall obtain permission from Water Resources Department, Govt. of Orissa for drawl of water.
- 10) No ground water shall be extracted for the project work at any stage.
- 11) The technical specification of CFBC system, lime requirement along with point of injection into the bed, peak temperature of combustion, SO<sub>2</sub> and NO<sub>x</sub> emission potential etc. from the manufacturer to ensure the pollution potential (both qualitative and quantitative) of the proposed project with respect to bed ash, fly ash, effluents, emissions etc. to be submitted to SEIAA before commissioning of the plant.
- 12) The proponent shall treat the flue gas through Flue Gas De-sulfurisation (FGD), if SO<sub>2</sub> emission level exceeds the prescribed norm.
- 13) 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.
- 14) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be ensured as per fly ash notification of MoEF, Govt. of India. Unutilized fly ash and bottom ash shall be stored in the ash pond separately through high concentration slurry disposal method. Mercury levels along with other heavy metals (Pb, Cr. As etc.) should be monitored in the fly ash /bottom ash, leachates and effluents emanating from the ash pond.
- 15) 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.
- 16) The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary. Arrangements shall be made so that effluents and storm water do not get mixed.
- 17) A sewage treatment plant shall be provided and the treated sewage shall be used for raising green belt/ plantation.
- 18) 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 SEIAA within six months.
- 19) Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Details of these measures to be taken along with location plant layout shall be submitted to the SEIAA, Orissa.
- 20) Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made in the plant area where risk is minimum. On site and off site Disaster Management Plans shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications

- required, if any shall be incorporated in the Disaster Management Plan (DMP). Sulfur content in the liquid fuel will not exceed 0.5%.
- 21) Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and half yearly reports shall be furnished to the SEIAA, Orissa.
  - 22) A green belt of adequate width and density preferably with local species along the periphery of the plant & alongside roads etc. shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 33% of the total land area shall be under permanent green belt throughout the year & for this purpose they may engage professionals in this field for creation and maintenance of the green belt. An action plan for this purpose shall be prepared accordingly and submitted to the SEIAA, Orissa.
  - 23) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
  - 24) Noise levels emanating from turbines and air compressors shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipments 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.
  - 25) Regular monitoring of ground level concentration of SO<sub>2</sub>, NO<sub>x</sub>, RSPM (PM<sub>10</sub> & PM<sub>2.5</sub>) etc. shall be carried out in the impact zone and records to be 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, Orissa.
  - 26) Management and disposal of other solid waste and hazardous waste generated shall be done by the project proponent as per the provisions of the relevant statutory rules.
  - 27) Provision shall be made for housing of construction labourers 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 the completion of the project.
  - 28) An Environmental cell comprising of atleast 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 of 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.
  - 29) Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to the appropriate authorities (SEIAA, Orissa).
  - 30) 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.
  - 31) The need of the local people should be appropriately addressed in the CSR activities to be undertaken by the project proponent in the area. An action plan in this regard should be prepared and submitted to SEIAA, Orissa.
  - 32) 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 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 area available with the State Pollution Control Board and SEIAA.

- 33) 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.
- 34) The environment statement for each financial year ending 31<sup>st</sup> 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.
- 35) The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract penal action under the provisions of Environment Protection (EP) Act, 1986.

**Member Secretary**

Memo No \_\_\_\_\_/Dt. \_\_\_\_\_

Copy to

1. Ministry of Environment & Forests, Govt. of India, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi for kind information.
2. Principal Secretary, Forests & Environment Dept., Government of Orissa for kind information.
3. Chairman, State Pollution Control Board, Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for kind information.
4. Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharapur, Bhubaneswar for kind information.
5. Chairman, Central Pollution Control Board, CBD-cum-office Complex, East Arjun Nagar, New Delhi-110032 for kind information.
6. Collector & District Magistrate, Bhadrak for kind information and necessary action.
7. Chairman/Member/Member Secretary, SEIAA for kind information.
8. Chairman, SEAC/Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for kind information.
9. Guard file for record.

**Member Secretary**