



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

(Constituted vide order No. S.O. 2674 (E) Date 17th 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, Website - www.orissaseiaa.gov.in

Ref. No. _____

Dt. _____

SEIAA – 39/10

From

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

To

Mr. V.T Joshi
ESSAR Power Ltd.
Essar House, K.K Marg,
Mhalaxmi, Mumbai – 400034
Phone-+911206626666
Fax-+911206626690

Sub: Environmental Clearance for 2X30 MW coal based captive power plant at Bijaychandrapur in the district of Jagatsinghpur.

Sir,

This has reference to your letter no. EPOL/ENV/09-09/01 dated 06.10.2009 along with application for Terms of Reference (ToR) and subsequent application vide letter no EPOL/161/2011 dated 19.09.2011 and no EPOL/185/11 dated 20.10.2011 on the above mentioned subject I am directed to say that the State Environmental Impact Assessment Authority, Odisha have considered the application for the proposal for 2x30 MW CPP (Phase-II) at Vijaychandrapur, Kujanga, Paradeep in the district of Jagatsinghpur of M/s Essar Power Ltd.. Essar Steel Orissa Limited (ESOL) is setting up a 6 MTPA Integrated Steel Plant (ISP), with 12 MTPA Pellet Plant at Paradeep, Kujanga Block, in the district of Jagatsinghpur, Orissa for which EC from MoEF and NOC from SPCB, Orissa have been obtained. To cater to the power requirement of Pellet Plant, Essar Power (Orissa) Limited (EPOL) is proposing to set up a 120 MW Captive Coal based power plant in two phase of 60 MW (2X30 MW) each. The proponent has obtained EC from SEIAA, Odisha and NOC from SPCB, Odisha for phase I (2X30 MW). TOR for phase II project issued by SEAC vide No. 220/SEAC/73 on 22.01.2010 and modified TOR issued by SEAC vide No. 440/SEAC/73 on 03.08.2010. Public consultation was held on 27th July, 2011. Land requirement is 50 acres each for phase-I & II. Phase II Power Project consists of 2 nos. of AFBC boilers & Steam Turbine Generators. Power evacuation will be through 220 KV switch yard. Coal requirement is 1400 TPD. Startup Fuel is High Speed Diesel (HSD). Water requirement is 256 m³/hr. Source of water is Taladanda

Canal. Project cost is Rs. 254 Crores. Ash ponds and coal stack yard will be common for phase-I & II. Ash generation will be 630 TPD. The proponent has proposed to use the Ash for cement manufacturing, low lying area filling and disposal in Ash pond. There is no defense installation, Biosphere Reserve, National Park/Wild Life Sanctuary within 10 km radius of the project. The consultant is Vimta Labs Limited, Hyderabad made detailed presentation on the proposal before the SEAC on behalf of the project proponent.

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 Form-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 27.07.2011 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 1st June and 1st December of each calendar year.
6. Land acquisition and transfer to EPOL should be complete in all respects before start of construction.
7. High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³.
8. Excess water along with storm water during monsoon should not be discharge into the surrounding low lying area. The storm water shall be stored in reservoir and after treatment shall be used for dust suppression.
9. 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. At no point of time the water will be discharged to surrounding areas.
10. Under no circumstances the process water shall be discharged to river Mahanadi. It should be properly treated, stored and 100% recycled in the process.

11. The DWR, GoO may be appraised of the allocation of required amount of water from ESOL to EPOL and the purpose of use other than already approved. A clearance to this effect may be produced before start of construction activity.
12. No ground water shall be extracted for the project work at any stage.
13. Details of fly ash utilization including low land filling. Long term leaching of harmful trace metals, especially in contact with higher saline environment has not been ensured yet. Therefore 100% utilization should be implemented as per fly ash notification for other uses like bricks, cement filter, building block etc.
14. The technical specification of AFBC system, lime requirement along with point of injection into the bed, peak temperature of combustion, SO₂ and NO_x 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.
15. Storing of unutilized ash in a pond, filling up of low lying areas, use in road construction etc. should be as per Notification issued by MoEF for fly ash utilization and amended in 2009.
16. The proponent shall treat the flue gas through Flue Gas De-sulfurisation (FGD), if SO₂ emission level exceeds the prescribed norm.
17. 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.
18. 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.
19. The ash pond should be constructed with impervious lining and ash pond embankment should be stone pitched.
20. 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.
21. A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/ plantation.
22. Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished to the SEIAA, Odisha.
23. 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.
24. 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%.
25. 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.
 26. 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 cover. The project proponent shall ensure proper maintenance of green belt throughout the year & for this purpose they may engaged 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.
 27. First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
 28. 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.
 29. Regular monitoring of ground level concentration of SO^2 , NO_x , RSPM (PM_{10} & $PM_{2.5}$) 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.
 30. 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.
 31. A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
 32. Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to the appropriate authorities.
 33. 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.
 34. 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.
 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 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, C.G.O 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, Paribesh 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, Chandrasekharpur, 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, Jagatsinghpur 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