

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
EASTERN REGIONAL OFFICE
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भारत सरकार,
पर्यावरण एवं वन मंत्रालय,
पूर्वी क्षेत्रीय कार्यालय
ए/3, चंद्रशेखरपुर, भुवनेस्वर - 751 023
तार - पर्यावरण, भुवनेस्वर

मिसिल नं. 106-21/ई.पी.ई.

दि. 12.09.2012

सेवामें

वैज्ञानिक 'F', आई.ए. मोनीटरिंग सेल,
पर्यावरण एवं वन मंत्रालय,
पर्यावरण भवन, सी. जी. ओ. काम्पलैक्स,
लोदी रोड, नई दिल्ली- 110003

विषय- मोनीटरिंग रिपोर्ट के सम्बन्ध में ।

महोदय

मुझे यह कहने का निर्देश हुआ है कि इस कार्यालय के द्वारा अगस्त, 2012 में ओडिशा राज्य के परियोजनाओं की मोनीटरिंग की गई । इस संदर्भ में परियोजनाओं को मोनीटरिंग की एक प्रतिलिपि आवश्यक कारवाई हेतु संलग्न है ।

भवदीय,

डॉ. प्रयाग
12/9/12
वैज्ञानिक 'F'

संलग्न - उपरोक्तानुसार ।

of

प्रेषित / Dispatched

दिनांक / Dated. 12.9.12.

for

Ministry of Environment & Forests
Regional Office
Bhubaneswar
Monitoring Report
PART - I

File No.: 101 - 380/EPE

1. Project type : Thermal.
2. Name of the Project : 2x660 MW Super Critical Coal based Thermal Power Plant near Khurunti, Dhenkanal, Odisha of M/s Lanco Babandh Power Private Ltd.
3. Clearance letter No. & date : J-13011/09/2009-IA.II (T) dated 17.02.2010.
4. Locations
 - a. District(s) : Dhenkanal
 - b. State(s) : Odisha
 - c. Latitudes/Longitudes : 20⁰ 49' 00" N/ 85⁰ 18' 20" E
5. Address of Correspondence
 - a. Address of concerned Head of Organization (with pin code and Telephone/telex/fax numbers) : Shri R.C. Narayana, Sr. Vice President (Projects), Lanco Babandh Power Limited, At/PO: Kharagprasad, Via: Meramundali, PS: Motonga, Dist: Dhenkanal - 759 121, Odisha. Ph: 06732- 212168.
 - b. Address of Executive Project Engineer/ Manager (with pin code and Telephone/telex/fax numbers) : Shri Ashok Patnaik, Asst. General Manager, 301A, Pal Heights, Plot No.: J/7, Jayadev Vihar, Bhubaneswar, Odisha - 751 013. Ph: 0674-2361188, Fax: 0674-2361166. E-mail: ashok.patnaik@lancogroup.com
6. Salient features
 - a. of the project : Plant Capacity: 1320 MW (2 x 660 MW), Supercritical Technology, High efficiency ESP- 99.956%, Zero discharge scheme, Ash utilisation & unused ash through High Concentration Slurry Disposal (HCSD), Green belt development (30% area).
 - b. of the environmental management plans : **Construction Phase:**
Dust suppression by Sprinkling water, plantation, Scrap and debris generated at site to be segregated and stored separately, Housekeeping, baseline environmental monitoring system, Environmental Management Cell, etc.

Operational Phase:
Supercritical technology, High efficient ESP with less than 50 mg/Nm³ PM emission, 275 m stack, low NOx burner technology, dust extraction/ suppression systems, enclosure for coal transfer, green belt development, HCSD system, Automatic dust suppression for ash silo unloading, rainwater harvesting, zero discharge, modular STP, oil water separator, portable oil handling system, lined fit in plastic bags for storage of resins, separate disposal sites, etc.

7. Breakup of the project areas (in ha)
 Forest area : 18.32 acre
 Non-forest area : 831.872 (Private land) & 97.3 acre (Govt. land)
 Total : 947.492 acre
8. Break up of Project affected population, with enumeration of those losing houses/dwelling units only, agricultural land and land less labourers/ artisans
- | | Project affected families | Families losing House/dwelling unit |
|---------------------------|------------------------------------|-------------------------------------|
| | 755 | Nil |
| a. SC, ST/Adivasis/ | : SC - 94, ST- Nil, Adivasis- Nil. | |
| b. Others | : Nil | |
| c. SC, ST/Adivasis Others | : Nil | |
9. Financial Details
- a. Project cost as originally planned and subsequent revised estimates and the years of price reference : Rs. 6930 Crores
- b. Allocations made for environmental management plans, with item wise & year wise break up : 488.4 Crores
- c. Benefit cost ratio/internal rate of return & the year of assessment. : 13.64% for year 2010-11
- d. Whether(c) includes the cost of environmental management as shown in (b) above. : Yes
- e. Actual expenditure incurred on the project so far. : Rs. 3695 Crores
- f. Actual expenditure incurred on the environmental management plans so far. : Rs. 159.41 Crores.
10. Forest land requirement
- a. The status of approval for a diversion of forest land for non-forestry use. : Forest clearance to be obtained.
- b. The status of compensatory : Non-forestry land identified: 8.094 ha.
 Village Name: Bidhiparbat,
 Khata/ Plot No. 13 (AAA)/57(P)
 Plantation Cost: Rs. 3.13 Lakh
 Total cost including fencing: Rs. 9.77 Lakh
 Species include: Teak, Sisoo, Gambhar, Neem, Harida, Bahad, Bamboo, etc.
- c. The status of clear felling : Nil
- d. Comments on the viability & sustainability of compensatory afforestation programme in the light of actual field experience so far. : Approved by CCF, Forest Diversion & Nodal Officer, FC Act.
11. The status of clear felling in non-forest areas (such as sub-mergence area of reservoir, approach roads), if any, with quantitative information. : No tree felling in non-forest areas.

12. Status of construction

- a. Date of commencement (proposed/actual) : July, 2010.
- b. Date of completion (proposed/actual) : Unit-I: April, 2014.
Unit-II: August, 2014.

13. Date of site visits:

- a. The dates on which the project was monitored by the regional office on previous occasions, if any. : Nil
- b. Date of site visit for this monitoring report. : 27th, August, 2012.

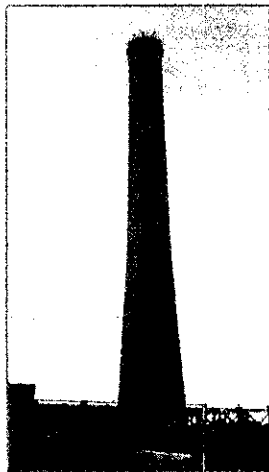
PART-III

Descriptive report on status of compliance to conditions of Environmental Clearance and Environmental Management.

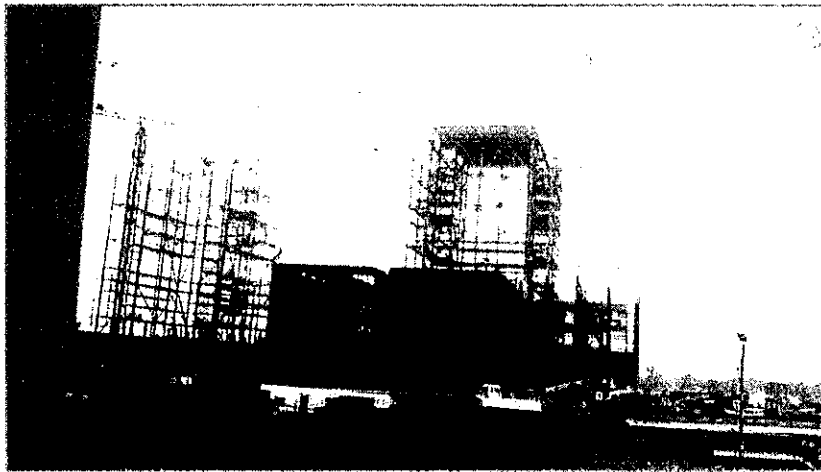
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1. Name of the Project : 2x660 MW Super Critical Coal based Thermal Power Plant by M/s Lanco Babandh Power Private Ltd.
 2. No. & date Environmental Clearance : J-13011/09/2009-IA.II (T) dated 17.02.2010.
 3. Address for correspondence
 - a) Address of concerned Head of Organization (with pin code and Tel./ telex/ fax numbers) : **Shri R. C. Narayana**,
Sr. Vice President (Projects),
Lanco Babandh Power Limited,
At/PO: Kharagprasad, Via: Meramundali,
Dist: Dhenkanal - 759 121, Odisha.
Ph: 06732- 212168.
 - b) Address of Head of project at site (with pin code and Tel. / telex/ fax numbers) : **Shri Ashok Patnaik**,
Asst. General Manager,
301A, Pal Heights, Plot No.: J/7,
Jayadev Vihar, Bhubaneswar,
Dist: Khurda, Odisha - 751013.
Ph: 0674-2361188, Fax: 0674-2361166.
E-mail: ashok.patnaik@lancogroup.com
 4. Date of site visit:
 - a. Previous dates of monitoring : Nil
 - b. Date of site visit for this monitoring : 27th, August, 2012.
 5. Project Location : Vil: Khurunti, Dist: Dhenkanal, Odisha, India.
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PRESENT STATUS OF THE PROJECT:

Project site was visited on 27th, August, 2012 along with Shri R.C. Narayana, Sr. Vice President (Projects), Shri P.K. Patnaik, General Manager (Civil), Shri Ashok Patnaik, Asst. General Manager and Shri Subash Kumar Sahoo, Health & Safety Officer. The project has an area of 947.492 acre of which 18.32 acre is forest area, 831.872 (Private land) & 97.3 acre (Govt. land). Forest Clearance is yet to be given to the project. The financial closure for 2x 660 MW Super Critical TPS was done in September, 2010 and construction started in December, 2010. It has been stated that the boilers for the project are from M/s Dongfang, China & turbine from M/s Harbin, China. Construction works for various units are in full swing. Structural erection for boiler of unit-1 is nearing completion and structural construction for unit-2 is 50% completed. The chimney construction work has been completed upto 217.6 m out of 275 m height. 80% of structural erection for Power House has been completed for unit-1 and structural work for unit-2 is in progress. Deck casting work for Turbo generation for unit-1 has been completed. And for unit-2, it is expected to be completed by the end of September, 2012. ESP construction for unit - 1 & 2 has progressed upto 35%. 70% of work of track Hooper has been completed. Tower erection for 400 KV switchyard has been completed. Works for Mills foundation and bunker fabrication for both the units is in progress. It has been stated that 70% of overall labour engaged for construction activities are from local villages around. Rest 30% are provided with facilities such as drinking water, electricity, sanitation, etc. in two labour camps.



View of the Chimney



View of the Construction of ESP

It has been stated that project has a total budget of Rs. 6930 Crores, of which Rs. 3695 Crores has already been spent towards the project so far. Out of Rs. 488.4 Crores allocated towards the environmental management plan, Rs. 159.41 Crores has already been spent towards various environmental safeguard measures.

As per the discussions held with the project authorities at site and observations made on the information provided by the project authorities during the site visit, the status of compliance to the environmental clearance conditions applicable at present, are as follows:

- (i) Forestry clearance as applicable shall be obtained under Forests (Conservation) Act, 1980 for diversion of forest land from the Competent Authority.

Status of Compliance:

It has been stated that Gram Sabha has been conducted. Model Certificate has been received from the District Collector. For Stage-I clearance SAG meeting has been conducted on 30.04.2012.

- (ii) Clearance (as applicable) under Wildlife (Protection) Act, 1972 from the Competent Authority shall be obtained.

Status of Compliance:

The list of flora & fauna of the proposed project issued by the DFO, Dhenkanal has been submitted vide Letter No. LBPL/Babandh/BBS/MoEF/220/11 dated 19.12.2011.

- (iii) Environmental Clearance is subject submission of complete details of R&R action plan (as applicable) with time schedule for implementation to the Regional Office of the Ministry and the Competent Authority in the state govt. The details shall include name of head of family wise details, the area of homestead land and other land to be acquired and the compensation paid/proposed to be paid etc. The time schedule of implementation shall be given.

Status of Compliance:

It has been stated that the R&R plan has been submitted to the District Administration on 27.08.2011. A copy of the receipt of the R&R Plan by the District administration bearing letter No. LBPL/Babandh/BS/MOEF/220/11 dated 19.12.2011 also has been submitted to this Office. **Project should submit the approved R&R Plan to the Regional Office.**

- (iv) Hydro-geological study of the area shall be reviewed annually and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity and quality is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.

Status of Compliance:

It has been stated that the groundwater quality is being monitored at Khragprasad (Tube well), Labour camp (Bore well), HR Office site (Tube well) & Kishinda nala (surface) by M/s Global Experts. As per the analysis reports submitted for June, 2012, there is no adverse impact found in the quality of ground water. Ground water quality parameters have been observed to conform to permissible limits of IS 10500-1991 of CPCB.

- (v) Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the surface water source even in lean season. It shall be ensured that natural drainage in the region is not disturbed due to activities associated with operation of the plant.

Status of Compliance:

It has been stated that area drainage studies have been conducted and all plant roads & drains are being designed based on the study report. All natural drains and other catchment area drain in the project area shall not be disturbed. **Details of the findings of the drainage studies along with the quantification of the flow should be intimated to the Regional Office.**

- (vi) A stack of 275 m height (Bi-flue) shall be provided with continuous online monitoring equipments for SO_x, NO_x and RSPM. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.

Status of Compliance:

Stack of 275 m height (Bi-flue) is under construction with continuous online monitoring equipments. It has also been stated that exit velocity of 22 m/sec will be maintained. The chimney construction work has been completed upto 217.6 m out of 275 m height.

- (vii) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³.

Status of Compliance:

Construction of ESPs with efficiency more than 99.8% in progress. It has been stated that the ESPs have been designed for an outlet emission concentration of less than 50 mg/Nm³.

- (viii) 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.

Status of Compliance:

It has been stated that elaborate dust extraction and dust suppression system have been incorporated in the design of coal handling plant & ash handling plant.

- (ix) Utilization of 100% Fly Ash generated shall be made from 4th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.

Status of Compliance:

It has been stated that ash utilisation plan has been made which includes use of fly ash: i) use of fly ash bricks for construction activities of project, ii) cement manufacturing, iii) grade-wise separation and packages for export, iv) use of fly ash in highway projects, v) light weight aggregate, vi) Cellular Light weight Concrete blocks (CLC), vii) coal mine void filling and viii) stone quarry void filling.

- (x) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be ensured from 4th year onwards. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. 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.

Status of Compliance:

It has been stated that 2 numbers of fly ash silos have been envisaged in the design for 2 units. The ash slurry will be disposed to the ash pond in high concentration.

- (xi) Ash pond shall be lined with HDP/LDP or any other suitable impermeable lining 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.

Status of Compliance:

It has been stated that for ash pond, required lining shall be provided after conducting Geo Tech and Permeability Study. A comprehensive study is being done in this regard and the details will be furnished after the report is ready. Project stated that adequate safety measures will also be implemented to protect the ash dyke from getting breached or possibilities of any leachate.

- (xii) For disposal of Bottom Ash (*if proposed to be undertaken*) in abandoned mines it shall be ensured 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.

Status of Compliance:

It has been stated that the condition will be complied with.

- (xiii) Closed cycle cooling system with induced draft cooling towers (IDCT) shall be provided. The Effluents shall be treated as per the prescribed norms.

Status of Compliance:

It has been stated that Closed Cycle Cooling Water System with IDCT has been envisaged. The blow down will be used in ash handling system and other areas like horticulture, coal dust suppression, etc.

- (xiv) The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not do not get mixed.

Status of Compliance:

It has been stated that the condition will be complied with.

- (xv) A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.

Status of Compliance:

It has been stated that the condition will be complied with.

- (xvi) 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.

Status of Compliance:

It has been stated that the rainwater harvesting scheme has been submitted to MoEF vide Letter No. LBPL/Babandh/BBS/MOEF/2010/253 dated 24.12.2010. **A copy of the Rainwater harvesting Scheme should be submitted to the Regional Office.**

- (xvii) 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.

Status of Compliance:

It has been stated that required safety measure has been taken in design for main plant area including coal yard and other off-site utilities and facilities.

- (xviii) 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.

Status of Compliance:

It has been stated that storage facility and Disaster Management Plan has been developed. Approval has been received from Petroleum & Explosives Safety Organisation (PESO) formerly Department of Explosives, Nagpur vide letter No. A/P/HQ/OR/15/1206(P291703) dated 11.04.2012 and submitted to the Regional Office.

- (xix) 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.

Status of Compliance:

It has been stated that the groundwater quality is being monitored at Khragprasad (Tube well), Labour camp (Bore well) & HR Office site (Tube well). As per the analysis report submitted for June, 2012, the quality of ground water parameters have been found to be within the permissible limits.

- (xx) Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70 %.

Status of Compliance:

The total project area is 947.492 acres. It has been stated that green belt development plan has been prepared and the total project has been divided in to 13 zones for raising green belt around the project as well as raising plantation. Plantation has been initiated in block No. 1 & 9 and 2000 saplings were planted during 2011-12 and another 2000 saplings are to be planted during 2012-13. The plan also has included plantation of native and slow growing species. Besides, plantation has been taken up in adjoining villages. An amount OF Rs. 23 Lakhs was spent during 2010-12 and Rs. 50 Lakhs has been allocated for 1012-13 for plantation in villages, including avenue plantation. Of amount allocated, Rs. 15 Lakhs has already been spent till August, 2012.

- (xxi) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.

Status of Compliance:

It has been stated that 40 persons have been trained in First Aid and deputed at site. A First Aid Centre has been established at site with all required facilities with one experienced Doctor who is assisted by two medical assistants. All contract labourers including drivers have been given required first aid as and when required.

It has been stated that 70% of overall labour engaged for construction activities are from local villages around. Rest 30% are provided with facilities such as drinking water, electricity, sanitation, etc. in two labour camps.

- (xxii) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. 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.

Status of Compliance:

Noise level is being monitored at 4 locations viz. Kharagprasad village, project office site, Cooling water area and labour camp. As per the report submitted noise level varies from 50.4-64.2 dBA (day time) & 5-52.8 dBA (night time) which is within the prescribed standards. It has been stated that requisite Occupational Health & Safety (OHS) measures will be implemented for the people working in the high noise area.

- (xxiii) Regular monitoring of ground level concentration of SO₂, NO_x, RSPM (PM₁₀ & PM_{2.5}) 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.

Status of Compliance:

It has been stated that the condition will be complied with.

- (xxiv) A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.

Status of Compliance:

As mentioned above, the R&R plan has been submitted to the District Administration on 27.08.2011. A copy of the receipt of the R&R Plan by the District administration bearing letter No. LBPL/Babandh/BS/MOEF/220/11 dated 19.12.2011 also has been submitted to this Office. **Project should submit the approved R&R Plan to the Regional Office.**

- (xxv) An amount of Rs 18.40 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 4.0 Crore per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.

Status of Compliance:

It has been stated that CSR activities such as education, provision of safe drinking water, supply of electricity, health, plantation, community development, relief works, sports & culture have already been started at local villages. During 2011-12, for education a total of Rs. 55.66 Lakhs (Scholarship programme- Rs. 6.8 Lakh, School health check up- Rs. 1.67 Lakhs, School Renovation work- Rs. 20.30 Lakhs, Bus Service - Rs. 20 Lakhs, etc.), for provision of drinking water Rs. 40.4 Lakhs (R.O. Water plant- Rs. 34.2 Lakhs, installation of Tube wells- Rs. 6.2 Lakhs), for health service Rs. 11.16 Lakhs (Health check up camps- Rs. 6 Lakhs, Distribution of tricycles, wheel chairs & artificial limbs- Rs. 3.5 Lakhs, etc.), for plantation & other activities Rs. 11.1 Lakhs (Institutional Plantation- Rs. 6.4 Lakhs, village plantation- Rs. 4.5 Lakhs & village green award- Rs. 20000), for construction of community hall - Rs. 7.22 Lakhs, for supply of electricity- Rs. 7.59 Lakhs (solar light installation- Rs. 6.24 Lakhs, Installation of transformer- Rs. 1.35 Lakhs), for relief works Rs. 2.13 Lakhs (flood relief- Rs. 1.56 Lakhs) and for Rs. 0.73 Lakhs have been spent towards cultural activities. It has also been stated that for the above activities, a total of Rs. 143.00 Lakhs will be spent during 2012-13.

- (xxvi) As part of CSR programme the company shall conduct need based assessment for the nearby villages 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 besides 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. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.

Status of Compliance:

It has been stated that an MoU has been signed with the State Govt. to build an Industrial Training Center (ITC) which is under construction stage.

- (xxvii) Provision shall be made for the housing of construction labour 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.

Status of Compliance:

As mentioned above, 2 labour camps have been provided to the labourers with basic facilities like drinking water, electricity, toilets, etc.

- (xxviii) 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 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://www.envfor.nic.in>.

Status of Compliance:

Project had advertised about the receipt of the environmental clearance from MoEF in "The Sambad" & "The Samaj" Odia daily newspapers on 27.02.2010.

- (xxix) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla 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.

Status of Compliance:

It has been stated that the condition has already been complied with.

- (xxx) A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.

Status of Compliance:

It has been stated that the Environment Management Cell has been set up with 4 members. The General Manager is the head of the Cell and assisted by the AGM (EHS) & Asst. Manager (EHS).

- (xxxi) 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; RSPM, SO₂, 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.

Status of Compliance:

AAQ is monitored at 4 locations viz. Project office site, Cooling water area, Labour camp and Kharagprasad village. As per the analysis report submitted for June, 2012, PM₁₀ ranged between 61.7 µg/m³ - 102.3 µg/m³, PM_{2.5} 31.5 µg/m³ - 51.4 µg/m³, SO₂ 10.5 µg/m³ - 14.8 µg/m³ and NO_x 10.3 µg/m³ - 13.4 µg/m³. All the parameters except PM₁₀ at Cooling water area (102.3 µg/m³) are found to be within the prescribed standards. **Water sprinkling frequency should be increased at Cooling water area to control dust emission. Housekeeping should be improved.**

- (xxxii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e- mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.

Status of Compliance:

Six monthly compliance reports are being submitted regularly.

- (xxxiii) 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 EC conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.

Status of Compliance:

It has been stated that it will be complied with in the Operation stage of the Plant.

- (xxxiv) 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.

Status of Compliance:

Six monthly compliance reports are being submitted by the project regularly. **The project should upload the six monthly compliance reports on to their website.**

- (xxxv) 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 up-load the compliance status in their website and up-date 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.

Status of Compliance:

Being complied with.

(xxxvi) 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.

Status of Compliance:

It has been stated that a total of Rs. 488.4 Crores has been allocated for implementation of various environmental protection measures. The cost includes: chimney Rs. 79.9 Crores, Cooling Towers (IDCT) Rs. 75 Crores, ESPs Rs. 160 Crores, High Concentration Slurry Disposal System for ash Rs. 80 Crores, ETP Rs. 12 Crores, STP Rs. 9.2. Crores, Dust extraction and dust suppression System Rs. 4.5 Crores, Dry fly ash collection system with ash silo Rs. 20 Crores, Zero discharge System Rs. 10 Crores, green belt development Rs. 10 Crores, Rainwater harvesting Rs. 7.8 Crores.

(xxxvii) 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.

Status of Compliance:

It has been stated that the project has achieved the financial closure on 08.09.2010.

(xxxviii) 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.

Status of Compliance:

It has been stated that it will be complied with.


(Dr. N.L.N.S. PRASAD)
SCIENTIST 'F'

PART- II

Conditions that need special attention:

1. Project should submit the approved R&R Plan to the Regional Office (Condition No. iii & xxiv).
2. Details of the findings of the drainage studies along with the quantification of the flow should be intimated to the Regional Office (Condition No. v).
3. A copy of the Rainwater harvesting Scheme should be submitted to the Regional Office (Condition No. xvi).
4. Water sprinkling frequency should be increased at Cooling water area to control dust emission. Housekeeping should be improved (Condition No. xxxi).
5. The project should upload the six monthly compliance reports on to their website (Condition No. xxxiv).



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Note: There are no serious violations noticed. Non-complied conditions have been brought to the notice of the project authorities.