

## **COMPLIANCE TO EC CONDITIONS** **[1x 100 MW (UNIT # III)]**

**STATUS AS ON 31<sup>st</sup> MARCH, 2012 ON COMPLIANCE OF CONDITIONS AND SAFE GUARDS LAID DOWN BY GOVT. OF INDIA , MINISTRY OF ENVIRONMENT OF FORESTS VIDE MEMORANDUM NO : J-13012/ 10/2004 – IA.II (T) OF 21 SEPTEMBER, 2005 FOR 1X100 MW CPP**

### **Condition No: 3. (i)**

***The conditions stipulated by Orissa Pollution Control Board vide their letters No. 33856/Ind-I-CON-3038 dated 03.12.2004 and no. 19425/IND-I-CON-3038 dated 29.6.2005 shall be strictly implemented.***

Conditions stipulated by the State Pollution Control Board, Odisha are strictly implemented.

### **Condition No: 3. (ii)**

***Ash content in coal should not exceed 40 % and the Sulphur Content should not exceed 0.50 %***

Ash content in coal is below 40% and the Sulphur content has been recorded 0.475% during October'11- Mar'12.

### **Condition No: 3. (iii)**

***Two Stacks of 130 mtr height with continuous on-line monitoring equipment and Exit Velocity of 30 m/s to be maintained. CFBC Boiler to be installed with in-built SO<sub>2</sub> reduction measures and low NOx burners shall be installed***

One Stack of 130 m height is connected to three nos. of CFBC Boilers. Continuous online monitoring system has been provided in the stack. All the three nos. of CFBC Boilers have been provided with in-built SO<sub>2</sub> reduction measures and low NOx emission device.

### **Condition No: 3. (iv)**

***High efficiency Electrostatic Precipitators (ESPs) having efficiency of not less than 99.9% shall be installed to ensure that SPM emissions do not exceed 100 mg/Nm<sup>3</sup>. Bag filters shall be installed in the coal handling area.***

The ESPs have been designed to keep the particulate emissions within 100 mg/ NM<sup>3</sup>. The average SPM value for the last six months (October, 2011 to March, 2012) was 77.53 mg/NM<sup>3</sup>, which is far below the limit of 100 mg/NM<sup>3</sup>. The values are enclosed.

Further, bag Filters have been provided in the Coal handling Plant and all transfer points.

**Condition No: 3 (v)**

***Ash utilisation should be carried out as per provisions of the notification on Fly Ash Utilisation issued by the Ministry in September, 1999 and its amendment. Borough earth shall not be taken from ash pond area for construction of ash dyke etc.***

Ash is being supplied to brick manufacturers and cement manufactures. Balance ash is being transported to Ash mound.

About 3, 69,253 MT of ash (from all the units) was used in different applications (Cement manufacturing, Bricks manufacturing and low-lying area filling) during the period 2011 - 12. The detailed ash utilization is enclosed.

To ensure 100 % ash utilization, a detailed ash utilization program is in place.

HINDALCO's own captive Mines will be available for back filling by 2014-15.

**Condition No: 3. (vi)**

***Closed Circuit Cooling Towers with induced draft shall be provided and it shall be ensured that only minimum water is drawn for makeup purposes from Hirakud reservoir. The effluent to be discharged into Kharjour nala should meet the prescribed discharge norms.***

Closed circuit cooling tower with induced draft has been provided and is being operated at more than 5.0 Cycle of Concentration (COC) in order to ensure minimum use of water for make-up purposes. The effluent is discharged to Khorjur nallah after meeting prescribed limits. The analysis report of the discharged water for the period October'11 – March'12 is enclosed.

**Condition No : 3. (vii)**

***Rain water harvesting shall be adopted in consultation with Central Groundwater Authority/ Board. The plan for the same shall be submitted within 3 months.***

A study of scope for rain water harvesting was carried out in 2007, which concluded that the scope for ground water recharge through rain water harvesting in the Hindalco area is very little for the reasons:

- i) Ground water utilization for the industry is very low,
- ii) Due to the presence of shallow water table and
- iii) Hard rock at shallow depth.

The copy of the report on Rain Water Harvesting has already been submitted to your office. However we are exploring other scopes for rain water harvesting.

**Condition No: 3 (viii)**

***Regular monitoring of water quality including heavy metals should be undertaken around ash dyke and the project area to ascertain the change in the water quality due to leaching of contaminants, if any, from ash disposal area.***

Regular monitoring of water quality including heavy metals is being carried out in the ash disposal area and the water quality meets the prescribed standard.

**Condition No: 3 (ix)**

***Noise level should not exceed 75 dBA (Leq). People working in the high noise area, should be provided with ear protective devices.***

Noise quality is being monitored regularly. The noise quality data monitored at various places is enclosed.

Operator cabins and workstations are provided with noise abatement measures such as glass shields. People working in the high noise area are provided with ear- muffs and PPE.

**Condition No: 3 (x)**

***Greenbelt along the plant boundary and plantation in vacant space in and around Hirakud complex shall be developed. A plan in this regard shall be prepared and submitted with in 3 months.***

Afforestation and plantation is being taken on the Ash transport road, in and around Plant and ash Mound area etc. About 5.64 lakhs trees have been planted since 1993-94 with an average survival rate of more than 75%. About 25,200 plants have been planted during the year 2011-12. The detail of plantation is enclosed enclosed.

**Condition No: 3 (xi)**

***Regular monitoring of the air quality shall be carried out in and around the power plant and records shall be maintained. Six monthly reports shall be submitted to this Ministry and its Regional Office at Bhubaneswar.***

The ambient air quality is being monitored at seven locations regularly. The ambient air quality data monitored for the last six months (October, 2011 to March, 2012) is enclosed.

**Condition No: 3 (xii)**

***For controlling fugitive dust, regular sprinkling of water in vulnerable areas of the plant shall be ensured.***

Regular moisturisation of coal heaps is adopted to reduce the fugitive dust emissions. Fixed water sprinklers are provided around the coal handling area.

**Condition No: 3 (xiii)**

***The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters 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

**Condition No: 3 (xiv)**

***A separate environment monitoring cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.***

A separate environment monitoring cell has been set up with qualified staff.

**Condition No: 3(xv)**

***Separate funds shall be allocated for implementation of environmental protection measures alongwith 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 shall be reported to the Ministry.***

Provisions are being made to allocate the funds for controlling the Pollution Control Equipment and abating the Pollution every year. The actual environmental expenditure for the period October, 2011 to March, 2012 was Rs. 1257.41 Lacs for all the four units (367.5 MW).. The detailed break-up expenditure incurred on Environment Protection is enclosed.

**Condition No: 3. (xvi)**

***Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry/ Regional Office/CPCB/SPCB.***

Being Complied

**Condition No: 3 (xvii)**

***Regional Office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. Complete set of Environmental Impact Assessment Report and Management Plan should be forwarded to the Regional Office for their use during monitoring.***

Already submitted the necessary documents to Bhubaneswar Regional office vide our letter of 04 November. 2005.

**Condition No: 3 (xviii)**

***Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhubaneswar/the CPCB/the SPCB during monitoring of the compliance of environmental status.***

Cooperation is being extended.

**Condition No: 4**

***The Ministry reserves the right to revoke the clearance if stipulated conditions are not implemented to the satisfaction of the Ministry. The stipulated conditions could be modified / altered or new conditions stipulated by the Ministry or any other Competent Authority in the interest of environment protection and the same shall be implemented by the project proponent.***

Agreed

**Condition No: 5**

***The environmental clearance accorded shall be valid for a period of 5 years for starting construction / operation of the power plant. In case the project authorities fail to do so within this stipulated period, this environmental clearance shall stand lapsed automatically.***

This is an operating unit.

**Condition No: 6**

***In case of any deviation or alternation in the project profile from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.***

Agreed

**Condition No: 7**

***The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management & Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments, the Environment Impact Assessment Notification of January, 1994 and its amendments.***