



Sri V. Malleshwar  
 President (T)

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**ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ**  
**Karnataka State Pollution Control Board**

"ಪರಿಸರ ಭವಾನಿ"

4 ಮತ್ತು 5ನೇ ಅಂತಸ್ತು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್,  
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NO.CFE-EIA/WCPM/EIA-685/2007-2008/ 155

DATED:

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16.11.2007

TO

The Executive Director  
 M/s West Coast Paper Mills Limited  
 Bangur Nagar, Dandeli  
 Uttara Kannada District - 581 325

ED  
 16/11/07

Sir,

Sub Consent for Establishment (CFE) under the Water and Air Act for expansion and modernization of existing Pulp & Paper Unit to increase the production of Paper & Paperboard from 1,63,750 TPA to 3,20,000 TPA and Co-generation Power capacity from 40.3 MW to 70.3 MW in the existing premises at Bangur Nagar, Dandeli, Uttara Kannada District, by M/s West Coast Paper Mills Limited.

- Ref 1 Your CFE application received on 1.12.2006 at Regional Office, KSPCB, Karwar
- 2 Inspection of your industry by Regional Officer, KSPCB, Karwar, on 22.12.2006 & 23.12.2006
- 3 Board Office letter No.3757 dated 12.1.2007.
- 4 Your letter No.ZZA.WCPM-KSPCB/2007 dated 27.1.2007.
- 5 Your letter No.ZZA/PD&P/18/2885 dated 27.1.2007.
- 6 Your letter No.ZZA.WCPM-KSPCB/2007 dated 16.2.2007.
- 7 Your letter No.ZZA.ED/DC dated 24.2.2007.
- 8 Proceedings of the 324<sup>th</sup> Technical Advisory Committee meeting held on 17.2.2007.
- 9 Board Office letter No 4263 dated 5.3.2007
- 10 Your letter No.ZZ/PD&P/18/285/9118 dated 9.4.2007.
- 11 Proceedings of the 326<sup>th</sup> Technical Advisory Committee meeting held on 28.4.2007.
- 12 Your letter No.ZZA/PD&P/18/381/12369 dated 16.5.2007.
- 13 Board Office letter No 733 dated 25.5.2007
- 14 Your letter No. ZZA/PD&P/18/455/14622 dated 6.6.2007
- 15 Board Office letter No.1060 dated 16.6.2007.
- 16 Your letter No.ZZA.WCPM-KSPCB/2007/15879 dated 22.6.2007
- 17 Proceedings of the 328<sup>th</sup> Technical Advisory Committee meeting held on 30.6.2007.
- 18 Board Office letter No.1275 dated 7.7.2007
- 19 Your letter No.ZZA/PD&P/18/532/17754 dated 12.7.2007
- 20 Proceedings of the Consent Committee meeting held on 3.9.2007 & 6.10.2007.

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With reference to the above, it is to be informed that, the Board hereby accords consent for establishment under the Water (Prevention & Control of Pollution) Act 1974, and the Air (Prevention & Control of Pollution) Act 1981, for expansion and modernization of existing Pulp & Paper Unit to increase the production of Paper & Paperboard from 1,63,750 TPA to 3,20,000 TPA and Co-generation Power capacity from 40.3 MW to 70.3 MW in the

existing premises at Bangur Nagar, Dandeli, Uttara Kannada District, by M/s. West Coast Paper Mills Limited., subject to the following conditions.

1. The industry shall comply with the conditions stipulated in the Environmental Clearance issued by MoEF, GOI dated 19.7.2007.

#### I. WATER CONSUMPTION:

1. The source of water shall be from Kali River and total water consumption shall not exceed 1,00,000 KLD. There shall not be any extraction of groundwater.

#### II. WATER POLLUTION CONTROL

1. The discharge from the premises of the applicant shall pass through terminal manhole/manholes where from the Board shall be free to collect samples at any time in accordance with the provisions of the Act or Rules made there under.
2. (a) The quantity of wastewater generation (trade and sewage effluent) shall not exceed 85,885 KLD and shall be treated in the effluent treatment plant to the standards stipulated in Annexure -I. The wastewater shall be segregated into pulp mill and paper machine stream and treated independently in the ETP before discharging into Halmaddi Nala leading to river Kali.  
(b) The industry shall ensure that the dissolved oxygen level in the treated effluent is maintained at a minimum level of 4 mg/l or 40% of the saturation limit whichever is higher at all times to maintain the aquatic life in the River. If the D.O. in the river water falls below 4 mg/l at the downstream of the effluent discharge point, industry shall stop its effluent discharge, till such time, the D.O level in the river rises significantly above 4.0 mg/l.  
(c) The industry shall conduct Bio-Assay test once in a month for evaluating toxicity of industrial effluent once in a month in accordance with IS 6582 - 1971. The test species selected being those which are predominant in Kali River. The report shall be furnished once in a month.  
(d) The industry shall continue to maintain Bio-Monitoring unit at single point discharge with fish species predominant in the Kali River. Part of the treated effluent shall be made to pass through this unit. A separate log book shall be maintained by the industry in which the details of fish/finger lings introduced daily/weekly and the number of finger lings died and survived daily should be recorded and reports furnished to the Regional Office, Karwar, once in a month.  
(e) Online pH, DO, Temperature and flow measurement devices provided at the single point discharge location shall be maintained in working condition and the data collected shall be computed and furnished to the Regional Office, Karwar, once in a month.
3. The industry shall make continued efforts in reducing the volume of effluent discharge into the river through recycling/reuse techniques and reducing the pollution load by adopting advanced wastewater treatment technologies.

4. Efforts shall be made to bring down the colour, total suspended solids in the final treated effluent.
5. The industry shall make the raw material storage yard impervious and as far as possible storage shall be suitably covered to prevent rainwater mixing and subsequent water pollution.
6. The industry shall as far as practicable recycle the cooling tower water and shall not be discharged into river.
7. The industry shall conduct the characterization of sludge generated for possible AOX & heavy metals and the characteristics of the benthic deposit/soil on the river bed down stream of discharge point at regular intervals depending on the flow condition in the river.
8. The industry shall use the treated effluent for gardening/landscaping instead of fresh water during non-rainy season.
9. The quantity of wastewater discharge shall be limited to less than 100 m<sup>3</sup>/Ton of paper.
10. The industry should take up study for blue green algae in the river during lean flow season.
11. (a) The industry shall provide an additional clarifier for Paper Mill effluent.  
(b) Immediately on reaching the expanded capacity, industry shall monitor the performance of ETP. In the event of effluent not meeting the standards, industry shall upgrade the ETP of Pulp Mill. For which, a plan of action shall be submitted after evaluating the ETP.
12. The industry should stop use of elemental Chlorine and to switchover to elemental Chlorine free pulp.

### III WATER CESS:

1. The industry shall comply with the provisions of Water (Prevention and Control of Pollution) Cess Act, 1977, by installing water meters, filing water cess returns in Form-I and other provisions as contained in the said Water (Prevention and Control of Pollution) Cess Act, 1977, and 2003.

### IV. AIR POLLUTION CONTROL:

1. The discharge of emissions from the premises of the applicant shall pass through the air pollution control equipment and discharged through stacks/chimneys mentioned in Annexure-II where from the Board shall be free to collect the samples at any time in accordance with the provisions of the Act and Rules made there under
2. (a) The stacks shall have port holes and platforms as per the guidelines specified in Annexure-III to facilitate monitoring of emissions.  
(b) Online stack monitoring with data log in the control room should be provided to all major emission sources.

3. The industry shall take all necessary measures to avoid odour nuisance from the process area, effluent treatment plant, etc. Monitoring of H<sub>2</sub>S and mercaptans shall be carried out once in a month.
4. (a) The industry shall ensure that the ambient air quality in its premises shall conform to the National Ambient Air Quality Standards specified in Environment (Protection) Rules, as enclosed in Annexure-IV.  
 (b) Three online AAQ monitoring stations near the boundary of the plant shall be set up.
5. The industry shall upgrade/modify/replace the control equipments if they are found inadequate to meet the standards stipulated. Prior permission of the Board shall be obtained for the same.
6. Fugitive emissions shall be controlled by providing dust collectors and water spraying system at material transfer points. Odour shall be controlled by installing odour collection system and subsequently incinerating in Rotary kiln. Monitoring of H<sub>2</sub>S and mercaptans shall be carried out once in a month in the work environment.

#### V. NOISE POLLUTION CONTROL:

1. The industry shall ensure that the ambient noise levels within its premises shall not exceed the limits i.e. 75 dB(A) Leq during day time and 70 dB(A) Leq during night time as specified in the Environment (Protection) Rules.

#### VI. SOLID WASTE (OTHER THAN HAZARDOUS WASTE) DISPOSAL.

1. The paper mill effluent clarifier sludge should be given to authorized board manufacturers. An account of recovery and sale shall be maintained.
2. Pulp mill effluent treatment plant sludge shall be collected, dewatered and reused in multi layered Board making within the factory.
3. Secondary sludge generated from the aeration tank shall be analyzed for the presence of Absorbable Organic Halides, if the presence of this compound is observed, same shall be disposed with due Authorization under Hazardous Waste (Management & Handling) Rules.
4. Whenever the deposits of sludge in the river bed are found in the left bank, the same shall be removed immediately.
5. The industry shall dispose the entire fly ash generated for brick making, cement making, etc.

#### VII. HAZARDOUS WASTES (MANAGEMENT & HANDLING) RULES 1989 & 2003:

1. The industry shall apply and obtain authorization under Hazardous Waste (Management & Handling) Amended Rules 2003, and comply with the conditions of the authorization to handle, store and to dispose hazardous waste generated.

## VIII ENVIRONMENTAL MANAGEMENT SYSTEM AND PLAN

1. The industry shall establish, implement and maintain an Environmental Management System in conformity with ISO 14001:2004 standards

## IX. HEALTH & SAFETY

1. The industry shall provide all necessary healthcare facilities to employees & local people and shall carry out routine health survey among employees & local people and tests like Spirometry, Pulseoxymetry, Lung function test, etc.
2. The industry shall regularly check the health of workers exposed to very high noise levels and suitable measures to avoid any ill effects shall be taken.
3. The industry shall take all safety measures to avoid any injury to its employees and local people as per the approved Onsite and Offsite Emergency Plan.

## X. GREENBELT

1. The industry shall raise the greenbelt to atleast 48 Hectares (30%) out of total 155 Hectares to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines and in consultation with local DFO.

## XI. GENERAL:

1. The industry shall comply with the "Charter on corporate Responsibility for Environment Protection" evolved by MOEF/CPCB during March 2003.
2. The industry shall arrange for alternate power supply to run and operate the essential units of effluent treatment plant/control equipments, in event of brake down of regular supply from Electricity Board. The industry shall provide separate energy meters to the Water and Air pollution control systems where appropriate. The action taken in this regard shall be informed to the Board within 30 days from the receipt of this Consent for Establishment/Clearance.
3. The industry shall transport and store the raw materials in a manner so as not to cause any damage to environment, life and property. The applicant shall be solely responsible for any damages to environment.
4. The industry shall not commission the proposed plant for trial or regular production unless necessary air pollution control equipments are installed to the satisfaction of the Board. The industry shall ensure that the treatment plant and control equipments are completed and commissioned simultaneously along with construction of the factory and erection of machineries.
5. The industry shall not change or alter (a) raw materials or manufacturing process, (b) change the products or product mix (c) the quality, quantity or rate of discharge/emissions and (d) install/replace/alter the water or air pollution control equipments without the prior approval of the Board.
6. The industry shall immediately report to the Board of any accident or unforeseen act or event resulting in release of discharge of effluents or emissions or solid wastes etc. in excess of the

standards stipulated. And the industry shall immediately take appropriate corrective and preventive actions under intimation.

7. The industry is liable to reinstate or restore, damaged or destroyed elements of environment at his cost, failing which, the applicant/occupier as the case may be shall be liable to pay the entire cost of remediation or restoration in advance an amount equal to the cost estimated by Competent Agency or Committee.
8. Exact date of commissioning of the plant shall be informed to the Board 45 days in advance so as to make necessary inspection of the plant and the pollution control measures provided by the industry.
9. The applicant shall comply with all the Rules and guidelines issued from time to time.
10. The Board reserves the right to review, impose additional condition or conditions, revoke, change or alter the terms and conditions.
11. This consent for establishment is valid for 5 years from the date of issue.
12. This CFE does not give any right to the Party/Project Authority/Industry to forego any legal requirement, that is necessary for setting/operation of the plant.
13. The industry shall furnish pointwise compliance to the conditions given under this consent for establishment within 30 days.

Please note that this is only consent for establishment issued to you to proceed with the formalities for expansion/modernization of industry and does not give any right to proceed with trial/regular production. For this purpose, separate consents of the Board for discharge of liquid effluent and the emissions to the air shall have to be obtained by applying in prescribed forms along with prescribed consent fee. The application for consent has to be made 45 days in advance of commissioning for trial production of the plant. Issue of consent will be considered only after completion of effluent treatment plant both for domestic and industrial effluent and installing air pollution control equipments as required.

The receipt of this letter may please be acknowledged.

FOR AND ON BEHALF OF  
KARNATAKA STATE POLLUTION CONTROL BOARD

  
SENIOR ENVIRONMENTAL OFFICER-1

Encl.: Annexure-I to IV.

## ANNEXURE - I

SL NO	Characteristics	Tolerance limits
1	Colour and Odour	See Note **
2	pH value	7 to 8.5
3	Bio-chemical Oxygen Demand, mg/l (3 days at 27°C) max	30
4	Chemical Oxygen Demand, mg/l Max	350
5	Suspended Solids mg/l Max	50
6	Oil and Grease mg/l. Max	10
7	Chloride (as Cl.) Mg/l. Max	350
8	Sulphate (as SO <sub>4</sub> ) mg/l. max	1000
9	Sulphide, mg/l Max	2
10	Total Residual Chlorine mg/l Max	1
11	Ammonical Nitrogen mg/l, Max	50
12	Total Kjeldal Nitrogen, mg/l Max	100
13	Free Ammonia, mg/l Max	5.0
14	Dissolved Phosphate, mg/l Max	5.0
15	Total Dissolved Solids (Inorganic) mg/l. Max	2100
16	AOx, kg/ton Max	1.0
17	TOCL	2 Kg/Ton of product

Note: All efforts should be made to remove colour and unpleasant odour as far as practicable.

*[Signature]*  
 SENIOR ENVIRONMENTAL OFFICER-4

ANNEXURE - II

LIST OF ADDITIONAL AIR POLLUTION SOURCES

Chimney No.	Chimney attached to	Minimum chimney height to be provided above ground level	Rate of emission NM <sup>3</sup> /Hr.	Constituents to be controlled in the emission	Tolerance limits mg/NM <sup>3</sup>	Air pollution Control equipment to be installed in addition to chimney height as per Col.(3)	Date of which air pollution control equipments shall be provided to achieve the stipulated tolerance limits and chimney heights conforming to stipulated heights
1	2	3	4	5	6	7	8
1	FBC Boiler-IV	85 meters	1,44,108	PM SO <sub>2</sub>	150	ESP	Before commissioning
2	Chemical Recovery Boiler-II	85 meters	2,25,720	PM H <sub>2</sub> S	150 10	ESP	Before commissioning
3	Rotary Lime Mud Re-burning Kiln-II	55 meters	39,600	PM	150	ESP	Before commissioning

- Note: 1. Low NO<sub>x</sub> burners shall be installed to the Boilers.  
 2. Dust suppression system shall be provided to Coal Yard

*M. K. ...*  
 SENIOR ENVIRONMENTAL OFFICER-4

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## ANNEXURE - III

### LOCATION OF SAMPLING PORTHOLES, THE PLATFORMS, THE ELECTRICAL OUTLET

1. Location of Portholes and approach Platform

Portholes shall be provided for all chimneys, stacks and other sources of emission. These shall serve as the sampling points. The sampling point should be located at a distance equal to atleast eight times the stack or duct diameters downstream and two diameters upstream from source of low disturbance such as a Bend, Expansion, Construction Valve, Fitting or Visible Flame for rectangular stacks, the equivalent diameter can be calculated from the following equation.

$$\text{Equivalent Diameter} = \frac{2 (\text{Length} \times \text{Width})}{(\text{Length} + \text{Width})}$$

2. The diameter of the Sampling Port should not be less than 3". Arrangements should be made so that the porthole is closed firmly during the period when it is not used for sampling.
3. An easily accessible platform to accommodate 3 to 4 persons to conveniently monitor the stack emission from the portholes shall be provided. Arrangements for an Electric Outlet Point off 230 V 15 A with suitable switch control and 3 Pin Point shall be provided at the Porthole location.

  
SENIOR ENVIRONMENTAL OFFICER-4  
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ANNEXURE-IV

Pollutant	Time Weighted Average	Concentration in Ambient Air		Method of Measurement
		Industrial Area	Residential, Rural & other Areas	
Sulphur Dioxide (SO <sub>2</sub> )	Annual Average* 24 Hours**	80 µg/m <sup>3</sup> 120 µg/m <sup>3</sup>	60 µg/m <sup>3</sup> 80 µg/m <sup>3</sup>	1 Improved West and Gacke method 2 Ultraviolet fluorescence
Oxide of Nitrogen as NO <sub>2</sub>	Annual Average* 24 Hours**	80 µg/m <sup>3</sup> 120 µg/m <sup>3</sup>	60 µg/m <sup>3</sup> 80 µg/m <sup>3</sup>	1 Jacob & Hochheiser modified (Na-Arsenite) Method 2 Gas Pulse Chemiluminescence
Suspended Particulate Matter (SPM)	Annual Average* 24 Hours**	360 µg/m <sup>3</sup> 500 µg/m <sup>3</sup>	140 µg/m <sup>3</sup> 200 µg/m <sup>3</sup>	(Average flow rate not less than 1 l m <sup>3</sup> / Minute)
Respirable Particulate Matter (size less than 10 µm)(RPM)	Annual Average* 24 Hours**	120 µg/m <sup>3</sup> 150 µg/m <sup>3</sup>	60 µg/m <sup>3</sup> 100 µg/m <sup>3</sup>	Respirable particulate matter sampler
Lead (Pb)	Annual Average* 24 Hours**	1.0 µg/m <sup>3</sup> 1.5 µg/m <sup>3</sup>	0.75 µg/m <sup>3</sup> 1.00 µg/m <sup>3</sup>	AAS Method after sampling using EPA 2000 or equivalent filter paper.
Carbon Monoxide (CO)	8 Hours** 1 Hour	5.0 µg/m <sup>3</sup> 10.0 µg/m <sup>3</sup>	2.0 µg/m <sup>3</sup> 4.0 µg/m <sup>3</sup>	Non dispersive infrared spectroscopy

- \* Annual Arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.
- \*\* 24 hourly/8 hourly values should be met 98% of the time in a year. However 2% of the time, it may exceed but not on two consecutive days.

*S. K. Sharma*  
SENIOR ENVIRONMENTAL OFFICER-1