THE WEST COAST PAPER MILLS LTD.,
Regd. Office & Works : P.B. No.5, Bangur Nagar, DANDELI-581 325. Dist. Uttar Kannada (Karnataka) India
Grams : "KAGAJMILL", Phone Nos. : (08284) 231391 - 395 (5 Lines)
Fax Nos. : 08284 231 225 (Admn. Off.) 232150 (Sales A/c s) 230443 (Works Off.) 232148 (Paper Godown)

ZZI/CLAB-KSPCB/04/ 6120
18-09-2015

Dy. Environmental Officer, **Speed Post with AD**
Karnataka State Pollution Control Board,
Regional Office, "Parisara Bhavan",
LIG-11b – 217, Near Hari Om Trust,
Habbuwada - KARWAR.

Dear Sir,

Sub: Environmental Audit statement for the year ending 31st March, 2015.

We are forwarding here with the Environmental Audit statement of our mills (In Duplicate) in prescribed format –"Form V" along with relevant annexure for the financial year ending 31st March, 2015.

We trust you will find the same in order.

Thanking You,

Very truly yours,
For THE WEST COAST PAPER MILLS LIMITED, DANDELI.

B.H.Rathi.
President (Tech)

Encl: Report in duplicate.

CC: **Member Secretary,**
Karnataka State Pollution Control Board,
49, Parisara Bhavan,
4th & 5th floor,
Church Street,
BANGALORE - 560 001.

Corporate Office : Chandrakiran, 4th Floor, 10-A, Kasturba Road, Bangalore-560 001
Phone Nos. : 080-22231828 to 1837, 22211760 Fax : 080-22231838. Grams : KAGAJCO.

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V

(See rule 14)

Environmental Statement for the financial year ending with 31st March -2015

PART-A

1.	**Name and address of the owner/occupier of the industry / operation or process.**	Shri K.L.Chandak, Executive Director, The West Coast Paper Mills Ltd., Bangur nagar, Dandeli.
2.	**Industry category Primary-(STC Code) Secondary- (STC Code)**	
3.	**Production category Units.**	3,20,000 MT/A
4.	**Year of establishment**	1955
5.	**Date of the last environmental statement submitted.**	08-09-2014

PART -B

Water and Raw Material Consumption			
		2013-2014	**2014-2015**

(I) **Water consumption, m^3/d**

	Process	**38,699**	**34,311**
	Cooling	**33,813**	**35,049**
	Domestic	**7,712**	**7,431**

Products	**Process water consumption per unit of products**	
	During the previous financial year	**During the current financial year**
	2013-2014	**2014-2015**
Paper & Paper boards	95	91

(II) Raw material consumption:

Name of Raw materials	**Name of product**	**Consumption of raw material per unit of output**	
		2013-2014	**2014-2015**
Attached as ANNEXURE –I			

PART-C

Pollution discharged to environment/unit of output

(Parameter as specified in the Consent issued)

Pollutants	**Quantity of Pollutants discharged (Mass/day)**	**Concentration of Pollutants discharged (Mass/volume)**	**Percentages of variation from prescribed standards with reasons**
(a) Water	Attached as ANNEXURE -II		
(b) Air	Attached as ANNEXURE -III		

PART-D

HAZARDOUS WASTES:
(As specified under Hazardous Wastes (Management, Handling & Transboundary Movements Rules, 2008 as amended 2010).

Hazardous Wastes	Total Quantity (Kg)	
	2013-2014	2014-2015
1. From process	WCPM as such doesn't generate any Hazardous Waste from processes. The used oil & furnace oil sludge used in machinery & DG sets respectively are covered under Sl. No. 5.1 & 3.3. Details given in **ANNEXURE – V**.	
2. From Pollution control facilities		

PART E

SOLID WASTES:

SOLID WASTES	Total Quantity (Kg)	
	2013-2014	2014-2015
1. From Process.	Attached as **ANNEXURE -IV**	
2. From Pollution control facilities.		
3. Quantity recycled or re- utilised within the unit.		

PART F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

PLEASE REFER ANNEXURE – V

PART-G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

PLEASE REFER ANNEXURE – VI

PART H

Additional measures/investment proposal for environmental protection including abatement of pollution.

PLEASE REFER ANNEXURE VII & VII A

PART I

Any other particulars in respect of environmental protection and abatement of pollution.

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Annexure-I

THE WEST COAST PAPER MILLS LIMITED, DANDELI.

CENTRAL LABORATORY

Raw material work sheet

					For the Year	
1		**RAW MATERIAL**			**2013-14**	**2014-15**
		Paper Production	**MT**	:	**310,002**	**300,514**
	A)	**Writing and Printing**	**MT**	:	256,728	244,948
	B)	**Duplex Board.**	**MT**	:	53,274	55,566
		Pulp Production			**221,915**	**217,661**

LIST OF RAW MATERIALS

Sl No		*Raw material*	*Principle*	**2013-14**	**2014-15**
				Qty/Month	***Qty/Month***
I	A)	Wood	Pulp manufacture	73,507	66,147
	B)	Bamboo	Pulp manufacture	-	-
	C)	Imported Pulp	Paper making	442	264
	D)	Waste Paper	Paper making	2,186	2,057
	E)	Indigenous Pulp	Paper making	-	-

II MAJOR CHEMICALS & DYES CONSUMED.

	1	Caustic Soda,***	MT	Cooking chemicals & for bleaching of pulp	539	665
	2	Salt Cake,	MT	Make up chemical	455	390
	3	Burnt lime,	MT	For preparation of white liquor from green liquor & for bleach liquor preparation.	7,685	7,511
	4	Chlorine,	MT	Water dozing	246	237
	5	Alum / PAC	MT	Sizing of paper	879	643
	7	Rosin,	MT	Sizing of paper	42	49
	8	Talcum Powder / PCC / GCC	MT	Filler	4,620	4,282
	9	Soda ash,	MT	For preserving pulp properties.	7.8	2.3
	10	Sulphamic acid,	MT	Sizing of paper	2.2	2.6
	11	Sulphuric acid,	MT	Paper/Pulp Chem	335	252
	12	Hydrochloric acid,	MT	Additive for paper making	222	200
	13	Starch,	MT	Additive for paper making	763	759
	14	Glue	MT	Additive for paper making	0.8	0.6
	15	Sodium Sulphite	MT	Sizing of paper	0.029	-
	16	Common Salt	MT	Additive for paper making	11	16
	17	Optical Whitening agent	MT	Additive for paper making	132	123
	18	Dyes	MT	Additive for paper making	4.3	3.9

III FUEL CONSUMPTION ,

	1	Coal tonnes ,	MT	-	28,782	27,173
	2	Furnace oil./LSHS KL ,	KL	-	101	58

IV GREASE & OIL CONSUMPTION

Sl No		*Raw material*		**2014-15**
				Qty/Month
	1	SERVO SYSTEM 68	LTR	1,089
	2	SERVO GEM 3 [YELLOW GREASE]	KG	374
	3	MOBIL GEAR 600 XP150	LTR	347
	4	SERVO PRIME 46T	LTR	298
	5	SERVO MESH SP 220	LTR	177
	6	MOBIL GEAR 600 XP220	LTR	173
	7	SERVO PRIME 46	LTR	140
	8	SERVO GEM EP -2 GREASE	KG	137
	9	SERVO PLEX LC 2	KG	121
	10	HYDRAULIC OIL, BRAND- SERVO SYSTEM HLP-100	LTR	105
	11	MOBIL DTE EXCEL 46	LTR	104
	12	SERVO HYDREX 68	LTR	88
	13	SERVO PRIDE 40	LTR	81
	14	VBRITE VANIKLIN COIL	LTR	79
	15	SERVO PRIME 32	LTR	70
	16	SERVO TRANSFLUID OIL "A"	LTR	70
	17	MOBIL DTE 10 EXCEL 100	LTR	69
	18	MOBIL DTE 746	LTR	69
	19	LUBRICANT OIL, BRAND- MOBIL SHC 639	LTR	52
	20	SERVO CUT "S" OIL	LTR	50
	21	SERVO MESH SP -460 OIL	LTR	35
	22	MOBIL DTE 25	LTR	35
	23	MOBILITH SHC 220	KG	24
	24	SERVO SYSTEM HLP - 68 OIL	LTR	18
	25	OMEGA GREASE 77 OR MAINLUBE 340	KG	7.9
	26	SERVO COAT 140	KG	6.5
	27	OMEGA LUBRICANT GREASE - 85	KG	5.8
	28	SERVO SYSTEM 220	BRL	5.6
	29	OMEGA GREASE NO 65	KG	5.0
	30	SERVO SYSTEM 150	BRL	2.5
	31	SERVO MESH SP 320	BRL	2.3
	32	SERVO SYSTEM 46	BRL	1.5
	33	NEW TRANSFORMER OIL [MINERAL OIL]	BRL	1.3
	34	ARGINA X 40 LUBE OIL	BRL	0.4

STATEMENT OF POLLUTION DISCHARGED TO ENVIRONMENT - WATER (2014-2015)

ANNEXURE - II

Sl.No.	Pollutants (as specified in consent issued)		Stipulated Std. (as specified in consent)			Pollutants discharged		Percentage Variation from prescribed std. With reason.
			Tollerence Limit of pollutants concentration.		Quantity kgs/d.	Pollutant concentration	Quantity kgs/d	
1	Flow,	m^3/day	85,885		-	65,936	-	
2	Colour & Odour		All efforts to remove colour &		-	Light Brown and	-	
			odour as far as practicable			odourless		
3	Suspended solids	mg/l	50	[max]	4,294	33	2,176	-49
4	Particle size of suspended solids		Shall pass through 850 microns		-	<850	-	
			IS sieve					
5	Dissolved solids [inorganics]	mg/l	2,100	[max]	180,359	750	49,452	-73
6	Temperature	°C	Shall not exceed 40° in any section		-	33	-	
			ofthe stream within 15 Mts. down					
			stream from the effluent outlet					
7	pH value		7.0 to 8.5		-	7.3	-	
8	Oil & Greese	mg/l	10	[max]	859	Nil	Nil	
9	Total residual Chlorine	mg/l	1.0	[max]	86	Nil	Nil	
10	Ammonical Nitrogen [as N]	mg/l	50.0	[max]	4,294	Nil	Nil	
11	Total Kjeldhal Nitrogen [as N]	mg/l	100	[max]	8,589	1.2	79	-99
12	Free Ammonia [as NH_3]	mg/l	5.0	[max]	429	Nil	Nil	
13	BOD_5 at 20°C	mg/l	30.0	[max]	2,577	23	1,517	-41
14	COD	mg/l	250.0	[max]	21,471	128	8,440	-61
15	Cadmium [as Cd]	mg/l	2.0	[max]	172	-	-	
16	Chloride [as Cl]	mg/l	350	[max]	30,060	144	9,495	-68
17	Dissolved Phosphate [as P]	mg/l	5.0	[max]	429	Nil	-	
18	Sulphate [as SO_4]	mg/l	1,000	[max]	85,885	52	3,429	-96
19	Sulphide [as S]	mg/l	2.0	[max]	172	Nil	Nil	
20	Phenolic compound [as C_6H_5OH]	mg/l	1.0	[max]	86	Nil	Nil	
21	Bio assay		Not less than 90% of the test animal		-	-	-	
			shall survive in 96 hrs test. The test					
			shall be conducted as per IS 6582.					
22	AOX	kg/T	1	[max]	850	0.110	96	-89

Part C

STATEMENT OF POLLUTION DISCHARGED TO ENVIRONMENT -AIR FROM APRIL 2014-MARCH 2015

Annexure -III

Sl.No.	Stack	Pollutants	Rate of Discharge, Nm^3/d		Pollutants Concentration, mg/Nm^3		SPM Quantity, kgs/D		% Variation
			Tollerence Limits	Achieved	Tollerence Limits	Achieved	Tollerence Limits	Achieved	from Prescribed Std.
1	Chemical Rec. Boiler-I	SPM	3,000,000	2,536,368	150	79	450	200	-55
		H_2S	-	-	10	1.2	30	3.0	-89.9
2	Chemical Rec. Boiler-II	SPM	5,417,280	5,150,550	150	86	813	443	-45
		H_2S	-	-	10	1.2	54	6.2	-88.6
3	Rotary Lime Kiln -I	SPM	480,000	419,304	150	81	72	34	-53
4	Rotary Lime Kiln -II	SPM	950,400	839,396	150	84	143	71	-51
5	Smelt Dissolving Vent I	SPM	156,000	370,521	150	72	23	27	14
6	Smelt Dissolving Vent II	SPM	-	404,694	150	76	-	31	
7	F.B.C. boiler -I	SPM	2,208,000	Shut	150	Shut	331	Shut	
		SO_2	-	-	-	Shut	-	Shut	
8	F.B.C. boiler -II	SPM	2,973,888	1,775,632	150	79	446	140	-69
		SO_2	-	-	-	749	-	1,330	
9	F.B.C. boiler -III	SPM	3,323,520	3,120,356	150	47	499	147	
		SO_2	-	-	-	741	-	2,312	
10	F.B.C. boiler -IV	SPM	3,458,592	2,244,980	150	88	519	198	-62
		SO_2	-	-	-	736	-	1,652	
11	3.8 MW DG Set	SO_2	1,320,000	-	-	-	-	-	
12	4.0 MW DG Set	SO_2	1,320,000	-	-	-	-	-	
13	4.04 MW DG Set	SO_2	1,320,000	-	-	-	-	-	

Note: All the DG sets not in use.

Part -E

Annexure - IV

SOLID WASTE

Sl. No.	Particulars	Total Quantity generated, MT/Annum		Quantity Recycled /Sold, MT/Annum	
		2013-2014	2014-2015	2013-2014	2014-2015
A	**From Process**				
1	Saw Dust	15,244	10,068	15,244	10,068
2	Lime Sludge	143,106	135,002	143,106	135,002
3	Classifier Grit	1,555	1,565	1,555	1,565
4	Plastic waste from Duplex Machine	1,320	1,240	1,320	1,240
B	**From Pollution Control Facility**				
1	Dust from CRP boiler	45,946	46,887	45,946	46,887
2	Ash from Power House	83,641	70,322	83,641	70,322
3	Sludge from P.Mill ETP	218	329	218	329
4	Sludge from P.M/c ETP	7,742	8,217	7,742	8,217

Note:
1. The RLK have ESP as APC equipment and the dust generated is entirely recycled back, hence not considered .
2. Hypochlorite sludge, Metso Rejects & Dregs is not being generated as new Fiber line & recovery plant is running & old bleaching sequence is replaced with new one.

THE WEST COAST PAPER MILLS LIMITED, DANDELI.

The mill does not generate any Hazardous Waste but the used oil & oil sludge are considered under Sl. No. 5.1 & 3.3 .The details of characteristics & disposal of solid waste / Hazardous waste are given here.

SL. NO	DESCRIPTION OF SOLID WASTE	Qty MT./d 2014-15	Characteristics	DISPOSAL PRACTICE.
1	Saw dust	20 - 30	Dry wood dust	Used in Boilers as well as sold to external parties for secondary use
2	Classifier grit	3 - 5	Silica, 25-30%, $CaCO_3$, 60%, CaO, 1% - 2% and Na_2O, about 1%.	Used as Land fill
3	Plastic Waste from Duplex machines.	3 - 4	Plastics	At present, stored in yard. Party has been identified to take the plastic waste material for recycling.
4	Ash from Power House.	190-200	Silica, Al_2O_3, Fe_2O_3 etc.	1. Eco ash sold to bricks manufacturers. 2. Fly ash is supplied to cement and bricks manufacturers.
5	Sludge from effluent treatment plant [P.Mill]	0.5 - 1.0	Fibres, 85% Ash, 15%.	Used in filler layer of multilayer board machine.
6	Sludge from effluent treatment plant [P.M/c]	20 - 25	Fibres, 55% Ash, 45%.	Being sold to Board /egg tray manufacturer.
7	Generated garbage of colony	4 - 5	Kitchen waste.	Being converted in to manure & used in plantation areas.
8	Lubricating Waste Oil	0.04 - 0.06 KL	-	Taken by the Party having necessary approval from KSPCB, Bangalore,for reprocessing.
9	Waste Oil Sludge	Nil	-	-

Note:

The solid wastes from the cautisizing plant, ESP from CRP, have not been considered as they are being recycled back in to the system. The new RLK has an ESP as APC equipment and the dust generated is entirely recycled back, hence not considered.

PART - G

ANNEXURE - VI

Impact of Pollution Control Measures on conservation of natural resources and consequently the cost of production.

I Two Rotary Lime Kilns works to reburn the lime sludge and reuse the lime in process there by eliminating the land pollution problem caused in the disposal of lime sludge. This has also reduced the demand of Lime stone / Sea shell by around 1,35,002 MT worth Rs. 4,883 Lakhs for the year 2014-2015.

II To recover the cooking chemicals from the spent liquor, recovery Boilers (2 nos) are in use. The recovered cooking chemicals are re-used in the process for pulping purpose. The Recovery Boiler efficiently utilises the heat generated during the combustion of spent liquor in to steam and minimises the environmental pollution problem. The Steam generation from the Chemical Recovery Boiler in the Year 2014-2015 was 13,47,088 MT which has reduced the Coal demand by 2,92,210 MT worth Rs.13,243 Lakhs.

III The ESP provided to CRP boilers collect particulate matter from emission consisting of Sodium Sulphate & Sodium Carbonate, which are used as make up chemical. The quantity of ESP dust so collected corresponds to 46,887 MT which is equivalent to Rs. 3,281 lakh in the year 2014-2015.

IV Installation of FFE has reduced steam requirement by approximately 23,885 T/month equivalent to 5,555 MT/Month of Coal. The annual saving works to Rs. 3,008 lakhs for the year 2014-2015.

V We are using the chipper dust as a fuel in boilers to be eco friendly. This in turn is equivalent to 2,258 MT of Coal, due to which the annual saving works to Rs. 102 lakhs for the year 2014-2015.

VI We are manufacturing Precipitated Calcium Carbonate for use in paper manufacturing in place of high brightness Talcum powder. While manufacturing we are taking the flue gas of Rotary Lime Kilns thus avoiding GHG emissions like CO2 of about 15,000 MT per annum. This process helped us to save Rs 3,612 Lacs in the year 2014-15.

Annexure - VIIA

Plantation Acivities carried out **inside and around factory area.**

Year	Inside Factory Area (Numbers)						Around Factory Area (Numbers)				
	Eucalyptus	Acacia	Casaurina	Subabul	Others	Total	Eucalyptus	Acacia	Casaurina	Subabul	Total
1996	5,850	3,490	1,485	240	379	11,444	987	8,445	-	-	9,432
1997	1,070	4,530	-	240	183	6,023	2,424	6,960	-	-	9,384
1998	-	2,600	-	-	14	2,614	1,770	4,395	-	-	6,165
1999	-	1,802	50	302	32	2,186	2,315	27,007	975	-	30,297
2000	-	4,667	-	-	-	4,667	116	13,694	-	-	13,810
2001	1,044	-	-	-	-	1,044	15,794	6,301	104	-	22,199
2002	-	-	-	-	-	-	9,473	1,856	443	-	11,772
2003	-	-	-	-	-	-	8,462	2,444	135	4,632	15,673
2004	-	-	-	-	-	-	22,537	5,904	200	-	28,641
2005	-	-	-	-	-	-	63,887	3,817	-	-	67,704
2006	-	-	-	-	-	-	36,939	1,252	420	-	38,611
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
Total	**7,964**	**17,089**	**1,535**	**782**	**608**	**27,978**	**164,704**	**82,075**	**2,277**	**4,632**	**253,688**

Note: No plantation done in & around mill area from the year 2007 due to lack of area. The damaged/fallen / Removed trees are replaced by new one from time to time.