

“ FORM-V”
(See rule 14)

Environmental Statement for the financial year ending the 31st March 2016

Part - A

(i)	Name and address of the owner / occupier of the industry, operation or process	Sri. Navin Raj Singh, IAS Managing Director, The Mysore Paper Mills Ltd. Bhadravati - 577 302.
(ii)	Industry category Primary (STC code) Secondary (STC code)	RED -
(iii)	Production Capacity, MT Paper (NP & WPP) Sugar cane crushing	1,05,000 per annum 2,500 TCD
(iv)	Year of establishment	1936
(v)	Date of the last Environmental Statement Submitted	30.09.2015

PART - B

Water and Raw Material Consumption

(i). Water Consumption m3/d:

Process :	13605 *	Average during the year 2015-16
Cooling :	1090 * (Boiler feed & TG cooling water)	
Domestic :	5299*	

* Average figure for the year

Name of the product	Water consumption per ton of product output, m3	
	2014 -15	2015-16
1. Paper	131*	155
2. Sugar	0.53	0.18

* Average of figure for the year

(ii). Raw Material Consumption :

a. Name of the Product: **Paper**

Sl. No.	Name of the Raw material	Consumption per ton of output, tons	
		2014-15	2015-16
1.	Bamboo	0.121	0.025
2.	Wood	1.375	1.473
3.	Imported Pulp	0.09	0.079
4.	Captive Bagasse	0.636	0.650

b. Name of the Product: Sugar

Sl. No.	Name of the Raw material	Consumption per ton of output, tons	
		2014 -15	2015 -16
1.	Sugar Cane	10.47	10.54

Part – C.

Pollution discharged into environment per unit of output (Parameters as specified in the Consent issued):

a. Water:

Sl.	Pollutant	Average Quantity of Pollutants Discharged Kg/day	Average concentration of Pollutants in discharges(mass / volume) mg/l	Percentage of variation(freq uency)from prescribed standard with reasons
1.	a) Colour b) Odor	- -	Pale Yellow Nil	- -
2.	Suspended solids	364	29 mg/l	Nil
3.	Dissolved solids (inorganic)	9674	770 mg/l	Nil
4.	pH value	-	6.8 – 7.9	Nil
5.	Oils and Grease	-	0.0-0.0	Nil
6.	Ammoniacal Nitrogen (as N)	7	0..53 mg/l	Nil
7.	Total Kjeldahl Nitrogen(as N)	15	1.2 mg/l	Nil
8.	Free Ammonia (as NH ₃)	0.16	0.013 mg/l	Nil
9.	Biochemical Oxygen Demand(3 days at 20 °C)	151	12 mg/l	Nil
10.	Chemical Oxygen Demand	1146	91 mg/l	Nil
11.	Chloride (as Cl ⁻)	2859	227 mg/l	Nil
12.	Sulphate (as SO ₄)	529	42 mg/l	Nil
13.	Sulphide (as S ²⁻)	0.0	0.00 mg/l	Nil
14.	Bioassay	-	100% Survival 96 hrs. in100% Effluent	Nil
15.	Dissolved Phosphates(as P)	0.08	0.006 mg/l	Nil
16.	AOX (As Kg/ton of paper)	-	0.017 kg/t	Nil

b. Air:

Pollutant	Quantity of Pollutants discharged, kg/day	Con. of pollutants discharged in mg/Nm ³	% Variation from prescribed Standards with reasons
Suspended Particulate Matter	220	i. Coal fired boiler- 1 Avg. 66.5	No variation
	304	ii. Coal fired boiler-2 Avg.83.7	No variation
	425	iii. Coal fired boiler-3 Avg.88.3	No variation
	344	iv. Coal fired boiler-4 Avg.81.0	No variation
	173	v. SR boiler Avg. 118.3	No variation

Part – D

(As specified under the Hazardous wastes Hazardous wastes and management handling Rules – 1989)

Hazardous Wastes Generation	Total quantity (kg)	
	During 2014 –15	During 2015 –16
1. From Process - Waste oils - Oil bearing cotton waste - Containers	Waste oil=3780lit Cotton waste=250 kgs Plastic carboys=4956nos MS oil drums=95 nos	Waste oil=200lit Cotton waste=160Kg Plastic carboys=1192 nos MS oil drums= 574
a. From pollution control Facility :	Nil	Nil

Note 1: 200 Lits waste oil reused as fuel in our boiler during the year.

Note 2: HDPE carboys of 1192nos, and empty MS Drums 574nos(200lit), are being disposed to recyclers.

PART- E

Solid Waste Generation (Bone Dry weight)

		Total Quantity in MT (Dry Solids)	
		During 2014 - 15	During 2015 - 16
a.	From Process:		
	1. Sugar mill press mud	1827	1725
	2. Fly ash	36128	30946*
	3. Lime sludge & Grit	19611	12957
b.	From Pollution Control Facility:		
	Primary sludge from ETP	4850	2277
	Secondary sludge, from ETP	2590	752
c.	Quantity recycled or reused: Wood & Bamboo dust, Combustible waste of chipper	-	899.22
	Quantity generated	2350	213
	Quantity recycled as fuel	2350	213
	Quantity disposed as waste	0	0

*Note: 19390 MTs of flyash to other brick making units located adjacent to the mills. About 7050 MT of fly ash was lifted from the dump site, by the farmers .

The bottom ash of 4506MT, used for filling pot holes & levelling of mud roads, levelling of low laying areas at MPM township. The major quantity of Bottom ash, it was also disposed for use for building construction in and around Bhdravathi area

The total quantity of fly ash generated including bottom ash during the year 2015-16 is 30946 tons and entire quantity (100% reuse as against target 100%) was reused.

PART- F

Characteristics of and Disposal Practice adopted for Hazardous and solid wastes

A. Hazardous Wastes :

Waste Oils, Oily bearing cotton waste, & Chemicals containing empty carboys / MS drums.

Characteristics: Combustible waste lubricating oils, in liquid form.

Chemical composition: Petroleum based mineral oils

Disposal Method: Utilized as fuel in boilers along with furnace oil.

B. Solid Wastes:

1. Sugar Mill Press Mud :

Characteristics: Dark grey, sugary odour, non combustible, water insoluble solid discharged in the form of sludge containing about 70-75% moisture.

Disposal Method: Partly used in our own Sugar cane research farm and balance is lifted by local farmers for use as manure in their fields.

2. Fly ash:

Characteristics: Grey, odorless, noncombustible, water insoluble matter discharged in the form of coarse dry powder.

Loss on Ignition:	2- 13 %
Acid insoluble:	50 - 60 %

Disposal Method: Fly ash is being supplied to cement industries and brick manufacturers . The Mill is also using fly ash for land reclamation, land filling & pot holes filling (Roads) in and around the premises. This is moistened to about 25-30%, before loading to trucks to minimize dust emission during transportation.

3. Wood and Bamboo Dust :

Characteristics : Combustible waste generated in the form of dust and slivers while chipping the raw materials, with an inherent moisture content of about 20-50 %.

Disposal Method : It is being used as fuel in boilers.

4. Lime sludge and grit :

Characteristics: Alkaline, grey, odorless, non-combustible, water insoluble solid discharged in the form of sludge containing about 50 % moisture.

Chemical composition on dry basis:

CaCO ₃	78 - 88	%
MgCO ₃	3 - 5	%
Ca(OH) ₂	1 - 3	%
NaOH / Na ₂ CO ₃	0.5 - 1.0	%
Silica	5 - 13	%
R ₂ O ₃	1.5 - 4.5	%

Disposal Method : Lime sludge is disposed off through a sale disposal contract . majority of this is used in agricultural sector . A research study has already been taken up M/s University of Agriculture and Horticulture to scientifically established it safe usage in the agricultural sector. Final report awaited.

5. Effluent sludge from Primary treatment :

Characteristics: Brown. odorless, combustible waste disposed in the form of sludge containing 80-82 % moisture.

Composition: (on dry basis)

Organic matter	70 - 75 %
Inorganic Matter	20 - 25 %

6. Effluent sludge from Secondary treatment :

Characteristics: Brown. odourless, combustible waste disposed in the form of sludge containing 97-98 % moisture.

Composition: (on dry basis):

Organic matter	80 - 85%
Inorganic Matter	15 - 20 %

Disposal Method: The mixture of both these sludges after dewatering from the filter press will be disposed off to interested parties for manufacture of paper boards and to use as manure in agriculture lands

PART- G

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

1. As reported earlier , the mill had taken up various measures to reduce the impact of pollution on the environment .

2. Apart from the above the mill has taken up the following measures in this year

- Dumping of solid wastes in the mill own dumping yard has been stopped since 19.08.2015, to eliminate air and land pollution in dump yard and connected roads.
- Alternatively, ETP primary and secondary sludges after mixing and dewatering in the filter press are being handled in newly constructed impervious concrete platform at the ETP.
- Similarly, the lime sludge is being handled in newly constructed impervious concrete platform within the factory premises.
- AFBC Boiler No.1 60 TPH has been retrofitted with a new ESP by spending around Rs. 5 crores replacing old one. This is to ensure that the emission by this boiler is well within the Air Pollution permissible limits.
- In the coal handling plant the coal shed having a storage capacity of 3500 MT has been refurbished with side claddings on all the three sides to prevent emission of fugitive dust. Similarly, the stacker conveyor storage facility which can accommodate 6000 MT coal has also been refurbished with side claddings on all the three sides.
- A dedicated new macadam road has been constructed in the coal yard for movement of vehicles to prevent emission of fugitive dust.
- In order to quench the fugitive dust emission in the coal yard water sprinklers have been provided through out the length and breadth of coal yard besides providing the same inside the covered roof shed.
- A storm water collection pit has been provided in the coal yard to collect the storm water and the same will be pumped to ETP during monsoon season.
- All the existing boilers In operation have been overhauled by plugging ingress of air in the flue gas ducts to reduce volume of emissions .
- The mill has diversified its products to manufacture writing and printing papers after stopping the production of Newsprint. Due to this the mechanical pulping unit which was contributing around 50 % of the pollution load on ETP was permanently stopped. On account of this , the impact of pollution on both the ETP and the river Bhadra is reduced to a considerable level.
- The coal yard area has been extended by land reclamation by filling of the low laying area with fly ash to accommodate storage of coal.

3. The left hand side Electrostatic Precipitator of S R Boiler was renovated by spending about Rs. 45,00,000/-

4. the production of paper and sugar was affected due to closure of the mill on account of non compliance to air pollution norms. Accordingly, the associated emission of pollution to water bodies , air and land has been substantially reduced in this year as detailed in the format.

PART – H

Additional measures / investment proposals for environmental protection including abatement of pollution:

1. In order to comply with the proposed revised norms for AOX in the discharge water and consumption of fresh water per ton product, the mill has proposed an action plan to go towards cleaner and greener technologies. In this connection there is a proposal to retrofit the existing pulp mills with elemental chlorine free bleaching with an introduction of oxygen bleaching and chlorine dioxide bleaching by replacing elemental chlorine gas and calcium hypochlorite. The proposal is submitted to the government of Karnataka for obtaining necessary approvals.
2. Similarly in order to conserve and reduce the water consumption from the existing level of 120 m³/t to less than 40 m³/t, the mill has been exploring for suitable measures after obtaining necessary approval from the Government of Karnataka.
3. Meanwhile, Government of Karnataka has a proposal to lease out the mill to private entrepreneurs in due course of time. The proposal is pending before the government.

PART – I

Any other particulars for improving the quality of environment:

1. In the backdrop of listing the mill in the CEPI indexing which was at 72.33 during the year 2009 has been brought down to 45.27 during the year 2013 by carrying out all our efforts in reducing the adverse impact on environment.
2. Wide spread awareness has been given to all the involved stakeholders by conducting /participating in the local area meeting with respect to implementation of CEPI action plan.
3. There is a proposal to provide green coverage in the mill own dump yard after discontinuation of dumping of solid wastes in this location.
4. Performance evaluation of ETP, water auditing and greenhouse gas quantification has been carried out at the mill by utilizing in-house expertise and reports have been submitted to KSPCB/CPCB.
5. The existing press degs (3 Nos) have been adequately upgraded to handle a mixture of ETP Primary and secondary sludge to dewater them to a considerable level to get a mixed sludge of consistency more than 15%. This has avoided transportation cost besides eliminating emission of fugitive dust due to movement of trucks from the generating point to the dump yard.
6. The Mill has planned to replace fresh water with treated effluent for water sprinklers at coal yard and other roads in the factory premises.

