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FACT SHEET

**APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE WASTEWATER TO WATERS
OF THE STATE OF MISSISSIPPI
August 23, 2005**

Application No.: MS0001309

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Mississippi River Corporation
PO Box 727
Natchez, Mississippi 39121

b. Description of Applicant's Operation

De-inking of recycled wastepaper and conversion into pulp for distribution to paper mills. No paper is manufactured at this facility.

c. Production Capacity of Facility

Current average 388.6 tons per day is the long term average (5 years)

d. Description of Existing Pollution Abatement Facilities

Treatment includes: coagulation, clarification, filtration, sedimentation, and aerated lagoons.

e. Applicant's Receiving Water

Mississippi River

f. Description of Discharges

Outfall Serial No. 001 – 2.71 mgd as long term average which includes process wastewater, cooling and seal water, and shower and wash water.

2. PROPOSED EFFLUENT LIMITATIONS

See Draft Permit

3. MONITORING REQUIREMENTS

The applicant will be required to monitor regularly for flow and those parameters limited in Section 2 above with sufficient frequency to ensure compliance with the permit conditions. Frequency, methods of sampling, and reporting dates will be specified in the final permit.

4. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

Beginning the issuance date of this permit, the permittee shall achieve compliance with the effluent limitations specified in the draft permit.

5. PROPOSED CONDITIONS OF APPLICABILITY AND OTHER REQUIREMENTS

The applicant will be required at all times to operate facilities as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants.

The permittee shall provide an adequate operate staff which is duly qualified to carry out the operation, maintenance and testing functions required to insure compliance specified in the permit.

Maintenance of treatment facilities that result in degradation of effluent quality shall be scheduled during noncritical water quality period and shall be carried out in a manner approved by the Mississippi Office of Pollution Control.

The permittee is required to submit information of a periodic basis on the quality and quantity of effluent introduced into the facility by major contributing industries.

6. WATER QUALITY STANDARDS AND EFFLUENT STANDARDS APPLIED TO THE DISCHARGE

“State of Mississippi Water Quality Criteria” and 40 CFR 430 – Pulp, Paper, and Paperboard Point Source Category; Subpart I 40 CFR Part 430.92 and Part 430.94.

7. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Mississippi Office of Pollution Control Permit Board proposes to issue an NPDES permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Interested persons are invited to submit written comments on the permit application or on the Permit Board's proposed determinations to the following address:

Mississippi Department of Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39289-0385

Additional details about the application and the proposed determination, a sketch showing the location of the discharge, and a copy of the draft permit are available by writing [Public Notice Contact] at the Permit Board's address or calling 961-5171.

All comments received prior to [Public Notice End Date] will be considered in the formulation of final determinations with regard to this application.

b. Public Hearing

The Permit Board may hold a public hearing if there is a significant degree of public interest in a proposed permit or group of permits. Public notice of such a hearing will be circulated in newspapers in the geographical area of the discharge and to those on the agency's mailing list at least 30 days prior to the hearing.

Following the public hearing, the Permit Board may take such modifications in the terms and conditions of the proposed permits as may be appropriate and shall issue or deny the permit. Notice of issuance or denial will be circulated to those who participated in the hearing and to appropriate persons on the mailing list.

c. Issuance of the Permit When No Public Hearing is Held

If no public hearing is held, and, after review of the comments received, the Permit Board's determinations are substantially unchanged, the permit will be issued and become effective immediately.

If no public hearing is held, but there have been substantial changes, public notice of the Permit Board's revised determinations will be made. Following a 30-day comment period, the permit will be issued and become effective immediately, unless a public hearing is granted.

PERMIT RATIONALE FOR REISSUANCE
Mississippi River Corporation
Adams County
Natchez, Mississippi
Water NPDES No. MS0001309
August 16, 2005

I. FACILITY INFORMATION

Facility Name: Mississippi River Corporation
Facility Address: 30 Majorca Road
Natchez, MS 39120

Permit No.: MS0001309
SIC: 2611
Permit Writer: Tommy Wall
EPD Branch: Timber and Wood Products Branch

II. NATURE OF BUSINESS

Mississippi River Corporation (MRC) is a market pulp deinking plant. This facility deinks newspaper and other wastepaper, from which a groundwood free pulp is produced, baled, and shipped to paper mills for final paper manufacture. No paper is produced at this facility, only wet lap pulp. The Standard Industrial Classification (SIC) Code is 2611.

III. EFFLUENT AND RECEIVING STREAM FLOW DATA

Mississippi River Corporation has one outfall that discharges on the average 3.168 mgd of treated wastewater into the Mississippi River as projected. The average flow from their 2C application is 2.71 mgd, which is the flow used in the calculations. The flow is broken down as follows for 3.168 mgd:

Process water – 2,118,000 gpd
Cooling and seal water – 550,000 gpd
Shower and wash water – 500,000 gpd

The Mississippi River has an estimated 7Q10 of 140,000 cubic feet per second.

IV. 303(d) ISSUES

The South Central Lower Mississippi River is classified as fish and wildlife and is evaluated for pesticides, nutrients, siltation, organic enrichment, and low dissolved oxygen. This is an existing source with no proposed increase in loading.

V. TYPE OF WASTEWATER TREATMENT:

The wastewater treatment system consists of both physical and biological treatment. The system consists of a primary and secondary clarifier and two aerated lagoons. Nutrients are added to the two aerated lagoons for biological treatment. Two belt filters are now in use to dewater the sludge while waiting on parts to repair the screw press prior to landfilling. Water is returned to the primary clarifier from the dewatering process.

VI. EPA APPLICABLE CATEGORICAL GUIDELINES

Applicable Regulations
 State of Mississippi Water Quality Criteria

Best Professional Judgement (BPJ) has been used in establishing appropriate limitations. No categorical standards have been promulgated for the Deink Subcategory sources that does not additionally produce paper at their facility. Categorical criteria set forth in the Deink Subcategory standards are based upon integrated mills in which both pulp and paper are produced. Therefore, “The Development Document for Interim Final and Proposed New Source Performance Standards for the Bleached Kraft, Groundwood, Sulfite, Soda, Deink, and Non-Integrated Paper Mills”, Volume I Segment of the Pulp, Paper, and Paperboard Point Source Category, EPA 440/1-76/047-a Group I Phase II, USEPA, Jan 1976 was used in determining limitations. The development document has effluent data, which attributes BOD₅ and TSS to the deinking process. The proposed effluent limitations for BOD and TSS for MRC are calculated as a percentage of the waste loading generated from the deinking operation using the effluent limits established in 40 CFR Part 430 Subpart I, Secondary Fiber Deink Subcategory (BPT). 430.92. 40 CFR Part 430.94 (BAT) was used in establishing limits for pentachlorophenol and trichlorophenol.

VII. DATA FROM APPLICATION FORM (Enter the type of application, i.e. 2D)

Parameter	Maximum Daily Value	Long term average	# of Analysis
BOD	288 mg/l, 8599 lb/day	140 mg/l, 3164 lb/day	56
COD	676 mg/l, 20,183 lb/day		1
TOC	157 mg/l, 4687 lb/day		1
TSS	248 mg/l, 7167 lb/day	128 mg/l, 2892 lb/day	56
Flow	3.58 mgd	2.71 mgd	
Temp	Ambient		
PH	7.96 S.U	(Min) 6.74 S.U.	
Nitrogen	27.6 mg/l, 822 lb/day		
Aluminum	12.3 mg/l, 355 lb/day	3.81 mg/l, 86 lb/day	37
Pulp Production		388.6 tons per day	

Mississippi River Corporation Monthly Average Pulp Production for past five years
in (tons per day)

	2005	2004	2003	2002	2001	2000
December		394	427	385	438	366
November		403	385	408	400	366
October		405	404	402	344	367
September		393	388	424	363	381
August		408	378	411	361	373
July		398	387	406	353	364
June		398	395	406	343	377
May	393	367	390	378	347	390
April	384	385	396	396	377	377
March	389	390	409	402	363	382
February	399	397	413	390	362	372
January	411	401	410	390	397	361
	395.2	394.9	398.5	399.8	370.6	373

Overall 388.6 tons per day average for past five years

VIII. WATER QUALITY LIMITATIONS BASED ON WASTELOAD ALLOCATION
Not applicable

IX. CATEGORICAL GUIDELINE LIMITATIONS CALCULATIONS

BPJ Calculations using Categorical Guidelines

Outfall 001

The following table is extracted from 40 CFR Part 430.92

<u>Parameter</u>	<u>Average</u> (lbs/1000 lbs of product)	<u>Max</u>
BOD ₅	9.4	18.1
TSS	12.95	24.05
PH	5.0 - 9.0 S.U.	

Using data from EPA document 440/1-76/047-a which indicates that the de-inking process contributes 94.7% of BOD and 69.2% of the TSS for an integrated mill and at 388.6 tons per day production rate.

<u>Parameter</u>	<u>Average</u>	<u>Max</u>
BOD ₅	6,918 lbs/day	13,322 lbs/day
TSS	6,965 lbs/day	12,935 lbs/day

X. TOXICITY SCREENING

For Trichlorophenol and Pentachlorophenol, Total phenols reported as non-detect in MRC's Form 2C, the following table is extracted from 40 CFR Part 430.94

<u>Parameter</u>	<u>Maximum Limitations</u>	
	lbs/1000 lbs	mg/l
Pentachlorophenol	0.003	(.029)(24.4)/y
Trichlorophenol	0.001	(.010) (24.4)/y

Y = wastewater discharged in kgal per ton of product

$$Y = (2,710,000 \text{ gallons} * 1 \text{ Kgal}/1000 \text{ gal}) / 388.6 \text{ tons of product per day} = 6.97 \text{ kgal/ton}$$

<u>Parameter</u>	<u>Maximum Limitations</u>		
	lbs/day →	mg/l	mg/l
Pentachlorophenol	2.33 lb/day	0.103	.102 mg/l
Trichlorophenol	0.78 lb/day	0.035	.035 mg/l

In-stream Water Quality Evaluation for discharge into Mississippi River using Maximum Categorical Standards for Pentachlorophenol and Trichlorophenol

At a wastewater discharge of 2,710,000 gpd

$$IWC = 2,710,000 \text{ gpd (cubic feet / 7.48 gallons)} \times (1\text{day}/ 86,400 \text{ sec})/ 140000 \text{ cfs} = 0.0030\%$$

Pentachlorophenol Categorical Toxicity calculation after mixing $X_{ta} = (.102 \text{ mg/l}) (1000 \text{ } \mu\text{g}/\text{mg}) (.00003) = .00306 \text{ } \mu\text{g}/\text{l}$

Trichlorophenol Categorical Toxicity calculation after mixing $X_{ta} = (.035 \text{ mg/l}) (1000 \text{ } \mu\text{g}/\text{mg}) (.00003) = .00105 \text{ } \mu\text{g}/\text{l}$

Parameter	Reported Conc	Calculated Instream Conc. Based Upon Categorical Standards	MSWQS Acute Toxicity	MSWQS Chronic Toxicity	MSWQS Human Health Organism	EPA National Recommended CMC	EPA National Recommended CCC	EPA National Recommended Human Health Organism
Penta-chloro-phenol	Total phenol ND	.00306 $\mu\text{g}/\text{l}$	3.32 $\mu\text{g}/\text{l}$	2.1 $\mu\text{g}/\text{l}$	30 $\mu\text{g}/\text{l}$	19 $\mu\text{g}/\text{l}$	15 $\mu\text{g}/\text{l}$	8.2 $\mu\text{g}/\text{l}$
Tri-chloro-phenol	Total phenol ND	.00105 $\mu\text{g}/\text{l}$	none	none	None	none	None	6.5 $\mu\text{g}/\text{l}$

Categorical standards based upon Best Professional Judgement are in effect based upon in-stream water quality calculations for pentachlorophenol and trichlorophenol. Discharge at the categorical allowable limits appear protective of water quality.

Due to the high assimilative capacity of the Mississippi River, toxicity screening was required only for pentachlorophenol and trichlorophenol due to categorical standards. Based on our review of the application data, it does not appear the discharge will violate any of the respective water quality standards for any of the listed parameters.

XI. PROPOSED FINAL LIMITATIONS

1. Average Permit Limitations

Outfall	Parameter	Categorical Limitation	Water Quality Limitation	Present Permit Limitation	Proposed Permit Limitation	Basis
MS0001309-001	BOD ₅	6918 lb/day using BPJ	N/A	6676 lb/day	6676 lb/day	Previous Permit
	TSS	6965 lb/day using BPJ	N/A	6721 lb/day	6721 lb/day	Previous Permit
	Total Recoverable Aluminum	N/A	N/A	Report	Report	Previous Permit
	Trichloro Phenol	N/A	N/A	Report	Report	Previous Permit
	Pentachloro-phenol	N/A	N/A	Report	Report	Previous Permit
	pH	5.0-9.0 S.U.	6.0-9.0 S.U.	6.5-9.0 S.U.	6.0- 9.0 S.U.	MSWQS

2. Maximum Permit Limitations

Outfall	Parameter	Categorical Limitation	Water Quality Limitation	Present Permit Limitation	Proposed Permit Limitation	Basis
MS0001309-001	BOD ₅	13,322 lb/day using BPJ	N/A	12,885 lb/day	12,885 lb/day	Previous Permit
	TSS	12,935 lb/day using BPJ	N/A	12,482 lb/day	12,482 lb/day	Previous Permit
	Total Recoverable Aluminum	N/A	N/A	Report	Report	Previous Permit
	Trichloro Phenol	0.035 ppm using BPJ	N/A	0.041 mg/l	0.035 mg/l	BPJ
	Pentachloro-Phenol	0.102 ppm using BPJ	N/A	0.118 mg/l	0.102 mg/l	BPJ
	pH	5.0-9.0 S.U.	6-9 S.U.	6.5-9.0	6.0-9.0	MSWQS

- a) The proposed minimum and maximum pH of the effluent will be based upon the most recent MSWQS (6-9 S.U.) from the previous (6.5 – 9.0 S.U.) and will be monitored

once per day with a grab sample.

- b) In lieu of monitoring for trichlorophenol and pentachlorophenol, as per the categorical guidelines, the permittee may instead certify at the time of DMR submittal that chlorophenolic containing biocides are not being used at the facility, otherwise trichlorophenol and pentachlorophenol will be monitored weekly with a grab sample and reported monthly as an monthly average and a daily maximum.
- c) Total recoverable aluminum shall be monitored once a month with a 24-hour grab sample and reported monthly as in the prior permit.
- d) Biochemical Oxygen Demand (5-day) and Total Suspended Solids shall be monitored once per week with a 24-hour composite sample and reported monthly. Flow shall be measured continuously with a flow recorder and reported monthly.
- e) For the period of the last five years, the average daily production was 388.6 tons per day. The proposed mass limitations for the renewal permit are based upon the production rate of 375 tons per day as in the last permit due to the margin of compliance for the last permit term.