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DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
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Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

NOVEMBER 10, 2020

MR DARRELL DAUBERT
GENERAL MANAGER
WESTROCK CP STEVENSON
P.O. BOX 508
STEVENSON AL 35772

RE: DRAFT PERMIT
NPDES PERMIT NUMBER AL0022314

Dear Mr. Daubert:

Transmitted herein is a draft of the referenced permit.

We would appreciate your comments on the permit within **30 days** of the date of this letter. Please direct any comments of a technical or administrative nature to the undersigned.

By copy of this letter and the draft permit, we are also requesting comments within the same time frame from EPA.

Our records indicate that you are currently utilizing the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs). Your E2 DMRs will automatically update on the effective date of this permit, if issued.

The Alabama Department of Environmental Management encourages you to voluntarily consider pollution prevention practices and alternatives at your facility. Pollution Prevention may assist you in complying with effluent limitations, and possibly reduce or eliminate monitoring requirements.

If you have questions regarding this permit or monitoring requirements, please contact Alex Chavers by e-mail at **adchavers@adem.alabama.gov** or by phone at **(334) 271-7851.**

Sincerely,

Scott Ramsey, Chief
Industrial Section
Industrial/Municipal Branch
Water Division

Enclosure: Draft Permit

pc via website: Montgomery Field Office
EPA Region IV
U.S. Fish & Wildlife Service
AL Historical Commission
Advisory Council on Historic Preservation
Department of Conservation and Natural Resources

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE:	WESTROCK CP, LLC	
FACILITY:	WESTROCK CP, LLC – STEVENSON 1611 COUNTY ROAD 85 STEVENSON, AL 35772	
PERMIT NUMBER:	AL0022314	
RECEIVING WATERS:	DSN001, DSN002: DSN005, DSN006, DSN022, DSN023: DSN024, DSN025:	TENNESSEE RIVER UT TO TENNESSEE RIVER UT TO BENGIS CREEK

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

Draft

Alabama Department of Environmental Management

INDUSTRIAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0011: Process wastewater from paperboard manufacturing, landfill leachate, and stormwater associated with industrial activity 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Oxygen, Dissolved (DO)	-	-	REPORT mg/l	-	-	3X Weekly test	Grab	-
BOD, 5-Day (20 Deg. C)	14461 lbs/day	28902 lbs/day	-	-	-	3X Weekly test	Composite	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	3X Weekly test	Grab	-
Solids, Total Suspended	20205 lbs/day	40410 lbs/day	-	-	-	3X Weekly test	Composite	-
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	-
Nitrogen, Kjeldahl Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Nitrite Plus Nitrate Total 1 Det. (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Phosphorus, Total (As P)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0011 (continued): Process wastewater from paperboard manufacturing, landfill leachate, and stormwater associated with industrial activity 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Continuous	Recorder	-
Certification – River Monitoring 4/	-	-	-	-	0 Yes=0; No=1	Monthly	Not Applicable	June – September

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ Reporting for this parameter will be in compliance with Part IV.E.6.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN001T: Process wastewater from paperboard manufacturing, landfill leachate, and stormwater associated with industrial activity 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Toxicity, Ceriodaphnia Acute 4/	-	0 pass(0)/fail(1)	-	-	-	Annually	Grab	-
Toxicity, Pimephales Acute 4/	-	0 pass(0)/fail(1)	-	-	-	Annually	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ See Part IV.D for Effluent Toxicity Limitations and Biomonitoring Requirements.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN001Y: Process wastewater from paperboard manufacturing, landfill leachate, and stormwater associated with industrial activity 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Pentachlorophenol 4/	-	2.58 lbs/day	-	-	-	Annually	Grab	-
Trichlorophenol 4/	-	0.98 lbs/day	-	-	-	Annually	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ In lieu of monitoring for these parameters, the permittee may certify non-use of chlorophenolic containing compounds according to the requirements at 40 CFR 430.105 and 40 CFR 430.124 by entering *9 on the discharge monitoring report.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0021: Treated sanitary wastewater 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	30.0 mg/l	45.0 mg/l	Weekly	Composite	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	Weekly	Grab	-
Solids, Total Suspended	-	-	-	30.0 mg/l	45.0 mg/l	Weekly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Weekly	Instantaneous	-
Chlorine, Total Residual	-	-	-	-	1.0 mg/l	Monthly	Grab	-
E. Coli	-	-	-	126 col/100mL	235 col/100mL	Weekly	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN005Q: Landfill leachate and stormwater associated with industrial activity 3/ 5/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Quarterly	Grab	-
pH	-	-	REPORT S.U.	-	REPORT S.U.	Quarterly	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Quarterly	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Quarterly	Grab	-
Arsenic, Dissolved (As As)	-	-	-	-	4.22 µg/l	Quarterly	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Quarterly	Estimate	-
Cyanide, Free Available 4/	-	-	-	-	REPORT ug/l	Quarterly	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ For the purpose of demonstration of compliance with this parameter, "Cyanide, Free Available" and "Cyanide, Free" shall be considered equivalent. The test methods listed in 40 CFR 136.3, Table IB for "24.A Cyanide, Free" or equivalent EPA approved methods shall be used for analysis.

5/ In the event the sampling location for DSN005 is inaccessible due to the flooding, sampling shall be performed at an alternative upstream sampling location for purposes of compliance with this permit.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN006S, DSN0022S: Stormwater associated with industrial activity 3/ 4/ 6/
DSN023S: Process discharges associated with exterior rail car washing operations and stormwater runoff from industrial activity 3/ 4/ 5/ 6/
DSN025S: Stormwater associated with areas around wet decking operations 6/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Semi-Annually	Grab	-
pH	-	-	REPORT S.U.	-	REPORT S.U.	Semi-Annually	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Semi-Annually	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Semi-Annually	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Semi-Annually	Estimate	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.

5/ Monitoring for DSN023S is required during a qualifying storm event.

6/ DSN022 and DSN023 are considered representative of DSN006 and DSN025; therefore, monitoring is only required at these outfalls.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN023A: Process discharges associated with exterior rail car washing operations 3/ 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Monthly	Grab	-
pH	-	-	6.0 S.U.	-	8.5 S.U.	Monthly	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Monthly	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Monthly	Grab	-
Phosphorus, Total (As P)	-	-	-	-	1.0 mg/l	Monthly	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Monthly	Estimate	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ DSN023A must be sampled when wash water is being discharged outside of a qualifying storm event.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0241: Stormwater and contact water from wet decking operations 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Monthly	Grab	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	Monthly	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Monthly	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Monthly	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Monthly	Estimate	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit.

2. Test Procedures

For the purpose of reporting and compliance, permittees shall use one of the following procedures:

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance; however, should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.

b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures A and B above shall be reported on the permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The facility name and location, point source number, date, time and exact place of sampling;

b. The name(s) of person(s) who obtained the samples or measurements;

c. The dates and times the analyses were performed;

d. The name(s) of the person(s) who performed the analyses;

e. The analytical techniques or methods used, including source of method and method number; and

f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

5. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

a. The permittee shall conduct the required monitoring in accordance with the following schedule:

MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.

QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the quarter, i.e., (March, June, September and December DMR's).

SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be submitted with the last DMR for the month of the semiannual period, i.e. (June and December DMR's).

ANNUAL MONITORING shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be submitted with the December DMR.

b. The permittee shall submit discharge monitoring reports (DMRs) on the forms provided by the Department and in accordance with the following schedule:

REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING shall be submitted on a **monthly** basis. The first report is due on the **28th day of (MONTH, YEAR).** The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF QUARTERLY TESTING shall be submitted on a **quarterly** basis. The first report is due on the **28th day of [Month, Year].** The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF SEMIANNUAL TESTING shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF ANNUAL TESTING shall be submitted on an annual basis. The first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b by utilizing the Department's web-based Electronic Environmental (E2) Reporting System.

(1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's E2 Reporting system (this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the date specified in Provision I.C.1.b, unless otherwise directed by the Department.

If the E2 Reporting System is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within 5 calendar days of the E2 Reporting System resuming operation, the permittee shall enter the data into the E2 Reporting System, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of the dated e-mail, or hand-delivery stamped date), if applicable.

(2) The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable.

Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The permittee shall submit the Department-approved DMR forms to the address listed in Provision I.C.1.e.

(3) If a permittee is allowed to submit a hard copy DMR, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit.

(4) If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A. of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR and the increased frequency shall be indicated on the DMR.

(5) In the event no discharge from a point source identified in Provision I.A. of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR.

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

e. Discharge Monitoring Reports required by this permit, the AWPCA, and the Department's Rules that are being submitted in hard copy shall be addressed to:

Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail containing Discharge Monitoring Reports shall be addressed to:

Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

f. All other correspondence and reports required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

Alabama Department of Environmental Management

Water Division
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

g. If this permit is a re-issuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b above.

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

The permittee shall report to the Director, within 24-hours of becoming aware of the noncompliance, any noucompliance which may endanger health or the environment. This shall include but is not limited to the following circumstances:

(1) does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)";

(2) threatens human health or welfare, fish or aquatic life, or water quality standards;

(3) does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);

(4) contains a quautity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);

(5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and

(6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

The permittee shall orally report the occurrence and circumstances of such discharge to the Director within 24-hours after the permittee becomes aware of the occurrence of such discharge. In addition to the oral report, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c no later than five (5) days after becoming aware of the occurrence of such discharge.

b. If for any reason, the permittee's discharge does not comply with any limitation of this permit, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c below, such report shall be submitted with the next Discharge Monitoring Report required to be submitted by Part I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.

c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (http://adem.alabama.gov/DeptForms/Form421.pdf) and include the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

(3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

3. Updating Information

a. The permittee shall inform the Director of any change in the permittee's mailing address, telephone number or in the permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules, and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

5. Cooling Water and Boiler Water Additives

a. The permittee shall notify the Director in writing not later than thirty (30) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in a cooling or boiler system, not identified in the application for this permit, from which discharge is allowed by this permit. Notification is not required for additives that do not contain a heavy metal(s) as an active ingredient and that pass through a wastewater treatment system prior to discharge nor is notification required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the permittee. Such notification shall include:

(1) name and general composition of biocide or chemical;

(2) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach;

(2) quantities to be used;

(3) frequencies of use;

(4) proposed discharge concentrations; and

(6) EPA registration number, if applicable.

b. The use of a biocide or additive containing tributyl tin, tributyl tin oxide, zinc, chromium or related compounds in cooling or boiler system(s), from which a discharge regulated by this permit occurs, is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this permit or in the application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

6. Permit Issued Based On Estimated Characteristics

a. If this permit was issued based on estimates of the characteristics of a process discharge reported on an EPA NPDES Application Form 2D (EPA Form 3510-2D), the permittee shall complete and submit an EPA NPDES Application Form 2C (EPA Form 3510-2C) no later than two years after the date that discharge begins. Sampling required for completion of the Form 2C shall occur when a discharge(s) from the process(s) causing the new or increased discharge is occurring. If this permit was issued based on estimates concerning the composition of a stormwater discharge(s), the permittee shall perform the sampling required by EPA NPDES Application Form 2F (EPA Form 3510-2F) no later than one year after the industrial activity generating the stormwater discharge has been fully initiated.

b. This permit shall be reopened if required to address any new information resulting from the completion and submittal of the Form 2C and or 2F.

E. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

2. Best Management Practices

a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.

b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.

c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Spill Prevention, Control, and Management

The permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a water of the state or a publicly or privately owned treatment works. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and which shall prevent the contamination of groundwater and such containment system shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided.

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

The permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

2. Right of Entry and Inspection

The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

a. enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;

b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and

d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in b. and c. below:

b. A bypass is not prohibited if:

(1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;

(2) It enters the same receiving stream as the permitted outfall; and

(3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and

(3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.

d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.

b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

1. Duty to Comply

a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification; or denial of a permit renewal application.

b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.

c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.

d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.

e. Nothing in this permit shall be construed to preclude and negate the permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or Local Government permits, certifications, licenses, or other approvals.

2. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.

3. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

4. Compliance with Statutes and Rules

a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.

b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE

1. Duty to Reapply or Notify of Intent to Cease Discharge

a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.

b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

b. The permittee shall notify the Director as soon as it is known or there is reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(a) one hundred micrograms per liter;

(b) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;

(c) five times the maximum concentration value reported for that pollutant in the permit application; or

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(a) five hundred micrograms per liter;

(b) one milligram per liter for antimony;

(c) ten times the maximum concentration value reported for that pollutant in the permit application.

3. Transfer of Permit

This permit may not be transferred or the name of the permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;

(2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or

(3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.

b. This permit may be modified during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;

(2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

(3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;

(4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;

(5) Errors in calculation of discharge limitations or typographical or clerical errors were made;

(6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;

(7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;

(8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;

(9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;

(10) When required by the reopener conditions in this permit;

(11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);

(12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;

(13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or

(14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Permit Termination

This permit may be terminated during its term for cause, including but not limited to, the following:

a. Violation of any term or condition of this permit;

b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;

c. Materially false or inaccurate statements or information in the permit application or the permit;

d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;

f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;

g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee; or

h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. Permit Suspension

This permit may be suspended during its term for noncompliance until the permittee has taken action(s) necessary to achieve compliance.

7. Request for Permit Action Does Not Stay Any Permit Requirement

The filing of a request by the permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term or condition.

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the permittee and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit, or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition and the permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the permittee or not identified in the application for this permit or not identified specifically in the description of an outfall in this permit is not authorized by this permit.

PART III OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

3. Permit Enforcement

a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.

b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes.

(1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

c. If the permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the permittee has made a timely and complete application for reissuance of the permit:

(1) initiate enforcement action based upon the permit which has been continued;

(2) issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(3) reissue the new permit with appropriate conditions; or

(4) take other actions authorized by these rules and AWPCA.

4. Relief from Liability

Except as provided in Provision II.C.1 (Bypass) and Provision II.C.2 (Upset), nothing in this permit shall be construed to relieve the permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

C. PROPERTY AND OTHER RIGHTS

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

D. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.

2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.

3. Construction has begun when the owner or operator has:

   a. begun, or caused to begin as part of a continuous on-site construction program:

      (1) any placement, assembly, or installation of facilities or equipment; or

      (2) significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

   b. entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.

2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.

3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

H. DEFINITIONS

1. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.

4. AWPCA - means the Alabama Water Pollution Control Act.

5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.

6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.

7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.

8. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.

9. Daily maximum - means the highest value of any individual sample result obtained during a day.

10. Daily minimum - means the lowest value of any individual sample result obtained during a day.

11. Day - means any consecutive 24-hour period.

12. Department - means the Alabama Department of Environmental Management.

13. Director - means the Director of the Department.

14. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).

15. Discharge Monitoring Report (DMR) - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.

16. DO – means dissolved oxygen.

17. 8HC – means 8-hour composite sample, including any of the following:

    a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

    b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

18. EPA - means the United States Environmental Protection Agency.

19. FC – means the pollutant parameter fecal coliform.

20. Flow – means the total volume of discharge in a 24-hour period.

21. FWPCA - means the Federal Water Pollution Control Act.

22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

26. MGD – means million gallons per day.

27. Monthly Average – means, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.

28. New Discharger – means a person, owning or operating any building, structure, facility or installation:

    a. from which there is or may be a discharge of pollutants;

    b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and

    c. which has never received a final effective NPDES permit for dischargers at that site.

29. NH3-N – means the pollutant parameter ammonia, measured as nitrogen.

30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.

31. Point source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).

32. Pollutant - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.

33. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".

34. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.

35. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".

36. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

37. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.

38. Solvent – means any virgin, used or spent organic solvent(s) identified in the F-Listed wastes (F001 through F005) specified in 40 CFR 261.31 that is used for the purpose of solubilizing other materials.

39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.

40. TON – means the pollutant parameter Total Organic Nitrogen.

41. TRC – means Total Residual Chlorine.

42. TSS – means the pollutant parameter Total Suspended Solids.

43. 24HC – means 24-hour composite sample, including any of the following:

    a. the mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;

    b. a sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or

    c. a sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

44. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

45. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.

46. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

I. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART IV ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents, or minimizes the potential for, the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Plan Content

The permittee shall prepare and implement a best management practices (BMP) plan, which shall:

a. Establish specific objectives for the control of pollutants:

(1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;

c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;

d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;

e. Prevent or minimize stormwater contact with material stored on site;

f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;

g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;

h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;

i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;

j. Provide for the disposal of all used oils, hydraulic fluids, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;

k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;

l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;

m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;

o. Be reviewed by plant engineering staff and the plant manager; and

p. Bear the signature of the plant manager.

3. Compliance Schedule

The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.

4. Department Review

a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.

b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.

c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

5. Administrative Procedures

a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.

b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.

c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.

d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

B. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

a. All stormwater samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches.

b. The total volume of stormwater discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for storm event(s) sampled. The duration between the storm

event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

c. The volume may be measured using flow measuring devices, or estimated based on a modification of the Rational Method using total depth of rainfall, the size of the drainage area serving a stormwater outfall, and an estimate of the runoff coefficient of the drainage area. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

2. Stormwater Sampling

a. A grab sample, if required by this permit, shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable); and a flow-weighted composite sample, if required by this permit, shall be taken for the entire event or for the first three hours of the event.

b. All test procedures will be in accordance with part I.B. of this permit.

C. COOLING WATER INTAKE STRUCTURE (CWIS) REQUIREMENTS

1. The cooling water intake structure used by the permittee has been evaluated using available information. At this time, the Department has determined, using BPJ, that the cooling water intake structure represents the best technology available (BTA) to minimize adverse environmental impact in accordance with Section 316(b) of the Federal Clean Water Act (33 U.S.C. section 1326).

2. The permittee shall submit the following information at least 180 days prior to expiration of the permit:

a. design intake flow of the CWIS

b. percentage of intake flow, based on highest monthly average in last 5 years, used for cooling purposes;

c. an estimate of the intake flow reduction at the facility based upon the use of a 100 percent (or some lesser percentage) closed-cycle re-circulating cooling water system compared to a conventional once-through cooling water system

d. through screen design intake flow velocity

e. any impingement and entrainment data that may have been collected based on the operation of the facility's CWIS, collected since the effective date of this NPDES permit

f. a detailed description of any changes in the operations of the CWIS, or changes in the type of technologies used at the CWIS such as screens or other technologies affecting the rates of impingement and/or entrainment of fish and shellfish

3. The permittee is required to operate and maintain the CWIS in a manner that minimizes impingement and entrainment levels. Documentation detailing the steps that have and are being taken to minimize the impingement and entrainment levels shall be maintained on site and made available upon request.

4. Nothing in this Permit authorizes take for the purposes of a facility compliance with the Endangered Species Act. Under the Endangered Species Act, take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct, of endangered or threatened species.

D. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS

1. The permittee shall perform 48-hour acute toxicity tests on the wastewater discharges required to be tested for acute toxicity by Part I of this permit.

a. Test Requirements, Option A Screening Test

(1) The samples shall be diluted, using an appropriate control water, to the Instream Waste Concentration (IWC), which is 16% effluent. The IWC is the actual concentration of effluent, after mixing, based on the results of a CORMIX analysis.

(2) Any test where survival in the effluent concentration is less than 90% and statistically lower than the control indicates acute toxicity and constitutes noncompliance with this permit.

b. General Test Requirements:

(1) A grab sample shall be obtained for use in above biomonitoring tests. The holding time for each sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-012 or most current edition or another control water selected by the permittee and approved by the Department.

Effluent toxicity tests in which the control survival is less than 90% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.

In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.

c. Reporting Requirements:

(1) The permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).

(2) Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2. of this part, an effluent toxicity report containing the information in Section 2. shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.

d. Additional Testing Requirements:

(1) If acute toxicity is indicated (noncompliance with permit limit), the permittee shall perform four additional valid acute toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall be performed once per week and shall be performed during the first four calendar weeks following the date on which the permittee became aware of the permit noncompliance and the results of these tests shall be submitted no later than 28 days following the month in which the tests were performed.

(2) After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.).

e. Test Methods:

(1) The tests shall be performed in accordance with the latest edition of the "EPA Methods for Measuriug the Acute Toxicity of Effluents to Freshwater and Marine Organisms" and shall be performed using the fathead minnow (*Pimephales promelas*) and the cladoceran (*Ceriodaphnia dubia*).

2. Effluent toxicity testing reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate this requirement or may increase or decrease the frequency of submittals.

a. Introduction

(1) Facility Name, location and county

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

(5) Contract laboratory information (if tests are performed under contract)

(a) Name of firm

(b) Telephone number

(c) Address

(6) Objective of test

b. Plant Operations

(1) Discharge operating schedule (if other than continuous)

(2) Volume of discharge during sample collection to include Mean daily discharge on sample collection date (MGD, CFS, GPM)

(3) Design flow of treatment facility at time of sampling

c. Source of Effluent and Dilution Water

(1) Effluent samples

(a) Sampling point

(b) Sample collection dates and times (to include composite sample start and finish times)

(c) Sample collection method

(d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)

(e) Sample temperature when received at the laboratory

(f) Lapsed time from sample collection to delivery

(g) Lapsed time from sample collection to test intiation

(2) Dilution Water Samples

(a) Source

(b) Collection date(s) and time(s) (where applicable)

(c) Pretreatment

(d) Physical and chemical characteristics (pH, hardness, water temperature, alkalinity, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

(3) Deviations from referenced method, if any, and reason(s)

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

(10) Test temperature, pH and dissolved oxygen as recommended by the method (to include ranges)

(11) Feeding frequency, and amount and type of food

(12) Light intensity (mean)

e. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

(4) Disease treatment (if applicable)

f. Quality Assurance

(1) Reference toxicant utilized and source

(2) Date and time of most recent acute reference toxicant test(s), raw data, and current cusum chart(s)

(3) Dilution water utilized in reference toxicaut test

(4) Results of reference toxicant test(s) (LC50, etc.), report concentration-response relationship and evaluate test sensitivity. The most recent reference toxicant test shall be conducted within 30-days of the routine.

(5) Physical and chemical methods utilized

g. Results

(1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate

(2) Provide table of endpoints: LC50, NOAEC, Pass/Fail (as required in the applicable NPDES permit)

(3) Indicate statistical methods used to calculate endpoints

(4) Provide all physical and chemical data required by method

(5) Results of test(s) (LC50, NOAEC, Pass/Fail, etc.), report concentration-response relationship **(definitive test only)**, report percent minimum significant difference (PMSD).

h. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Action to be taken

1/ Adapted from "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", Fifth Edition, October 2002 (EPA 821-R-02-012), Section 12, Report Preparation

E. RECEIVING STREAM WATER QUALITY MONITORING REQUIREMENTS

1. The discharge authorized by this permit shall not cause a violation of the applicable dissolved oxygen standard downstream of the discharge. The permittee shall take steps necessary to ensure that its effluent does not result in dissolved oxygen values at the five-foot depth being depressed below the water quality standard as measured by the permittee, ADEM, EPA, or its successor.

2. Stream monitoring shall be performed between June 1 and September 30 downstream from the Westrock Mill Company, LLC discharge point. The parameters to be monitored are the dissolved oxygen, pH, and water temperature at the five-foot depth in the middle of the river.

3. Frequency

   a. Monitoring is required once per two weeks under normal conditions.

   b. Monitoring is not required if the in-stream dissolved oxygen at mile 405.7 is 6.0 mg/l or greater.

   c. Monitoring is required once per week during upset conditions or if the dissolved oxygen at any stations is 5.4 mg/l or less and will continue until the upset condition is corrected and/or the dissolved oxygen at all stations is greater than 5.4 mg/l.

   d. Monitoring is required three (3) days per week when the dissolved oxygen upstream of the mill discharge is 5.0 mg/L or less.

4. Locations

   Monitoring stations shall be at the Tennessee River miles 405.7 (power line crossing), 399, 395, and 387.

5. Sample Collection and Analysis

   Sample collection and analysis shall be performed in accordance with EPA approved sample collection protocol and analysis methods. The times samples are collected should be reported and when practicable, all measurement should be made prior to 12:00 pm.

6. Reporting

   River monitoring data shall be submitted electronically to an email address provided by the Department. The permittee is required to verify submittal of the river monitoring data by submitting a value of "0" on the discharge monitoring report for DSN0011 under the parameter "Certification – River Monitoring" for those months in which monitoring is required.

F. LAND APPLICATION REQUIREMENTS AND GROUNDWATER MONITORING

1. Land Application Operation Requirements

   During the period beginning the effective and lasting through the expiration of this permit, the permittee is hereby authorized to land apply paper mill process wastewater, primary and secondary sludge and wood waste boiler ash sludge to the permittee's fields numbered 1, 2, 3, 4, 6, 7a, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 24, 25,26, 27, 28, 30, 31, 32, 33 and 34 in accordance with the following conditions, limitations, and monitoring requirements.

   a. Sludge shall be applied at a rate no greater than 100 dry ton/acre/years

   b. Sludge application, on a field which is all or in part a 100 year floodplain, shall be limited to:

      (1) Surface application with plowing or disking of application area within 24 to 48 hours

   c. Spray application of sludge shall be limited to:

      (1) Fields with less than 10% slope

      (2) Fields not all or in part of the 100 year flood plain

      (3) Days without periods of rain and/or high winds which could carry the applied wastes offsite

   d. Surface application of sludge shall be limited to:

      (1) Day without heavy rainfall that could carry sludge offsite

      (2) Fields with less than 10% slope, unless sludge is plowed or disked into soil daily.

      (3) Fields that will be cropped during the next appropriate growing season.

e. Subsurface application of sludge shall be limited to fields that will be cropped during the next appropriate growing season.

f. Best management practices erosion control measures shall be implemented to minimize soil loss.

g. All spray/inject equipment and monitoring provisions shall be properly operated and maintained at all times to prevent leaks and spills.

h. The permittee shall perform annual monitoring of a representative sample of the material to be land applied. Parameters to be tested are Total Solids, TKN, Nitrates + Nitrites, Total Calcium, Total Magnesium, Total Sodium, Total Potassium, Total Barium, Total Cadmium, Total Copper, Total Lead, Total Manganese, Total Nickel, Total Zinc, Chlorides, Total Dissolved Solids, Total Sulfates, pH, and Sediment Sample (Dry Weight). Land application monitoring results obtained during the previous year shall be summarized on a form approved by the Department, and submitted to the Department no later than the 28th day of January following the monitoring period. As a minimum, the following records shall be maintained by the Permittee and will be subject to inspection by the Department:

(1) All information required by land application monitoring reports

(2) Field, date, and time span of application and volume applied

(3) Field, date, quantity and type of fertilizer applied

(4) Date and amount of rainfall

i. The permittee shall take necessary measures to ensure that sludge and/or runoff from the application fields does not enter a water of the state.

j. The permittee shall perform annual analysis of groundwater monitoring wells 1 through 25. Parameters to be tested area Conductivity, Sulfate, pH, Nitrates + Nitrites, Total Phosphorous, Total Potassium, Total Barium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Zinc, Chlorides, Total Dissolved Solids, and water level. Results of this testing shall be submitted to the Department no later than the 28th of January of the following year. The results shall be submitted in report form and shall include the following:

(1) The nature and the extent of any groundwater contamination (if any). Include contour maps showing the groundwater flow direction;

(2) Discussion of all analytical results;

(3) Discussion of concentration trends in each monitoring well

(4) All potentiometric data collected during each monitoring event, including top casing elevations, measured water level, total well depths, and calculated groundwater elevations;

(5) A potentiometric map illustrating the groundwater flow direction for each monitoring event;
(6) All field parameter data collected during the well purging activities;

(7) The specific dates that the groundwater sampling activities were conducted; and

(8) The report shall be prepared by and bear the signature and the license number of a licensed professional geologist or professional engineer registered in the State of Alabama.

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

FACT SHEET

APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE POLLUTANTS TO WATERS OF THE STATE OF ALABAMA

Date: October 18, 2019 **Prepared By:** Alex Chavers

NPDES Permit No. AL0022314

1. **Name and Address of Applicant:**

   WestRock CP, LLC
   Post Office Box 508
   Stevenson, AL 35772

2. **Name and Address of Facility:**

   Stevenson
   1611 County Road 85
   Stevenson, Alabama 35772

3. **Description of Applicant's Type of Facility and/or Activity Generating the Discharge:**

   Individual Permit - Standard

4. **Applicant's Receiving Waters**

Receiving Waters	Classification
UT to Bengis Creek	F&W
Tennessee River	PWS, S, F&W
UT to Tennessee River	F&W

   For the Outfall latitude and longitude see the permit application.

5. **Permit Conditions:**

   See attached Rationale and Draft Permit.

6. **PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS**

   a. **Comment Period**

   The Alabama Department of Environmental Management proposes to issue this NPDES permit subject to the limitations and special conditions outlined above. This determination is tentative.

   Interested persons are invited to submit written comments on the draft permit to the following address:

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

Russell A. Kelly, Chief
Permits and Services Division
Alabama Department of Environmental Management
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059
(334) 271-7714

All comments received prior to the closure of the public notice period (see public notice for date) will be considered in the formulation of the final determination with regard to this permit.

b. Public Hearing

A written request for a public hearing may be filed within the public notice period and must state the nature of the issues proposed to be raised in the hearing. A request for a hearing should be filed with the Department at the following address:

Russell A. Kelly, Chief
Permits and Services Division
Alabama Department of Environmental Management
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059
(334) 271-7714

The Director shall hold a public hearing whenever it is found, on the basis of hearing requests, that there exists a significant degree of public interest in a permit application or draft permit. The Director may hold a public hearing whenever such a hearing might clarify one or more issues involved in the permit decision. Public notice of such a hearing will be made in accordance with ADEM Admin. Code r. 335-6-6-.21.

c. Issuance of the Permit

All comments received during the public comment period shall be considered in making the final permit decision. At the time that any final permit decision is issued, the Department shall prepare a response to comments in accordance with ADEM Admin. Code r. 335-6-6-.21. **The permit record, including the response to comments, will be available to the public via the eFile System (http://app.adem.alabama.gov/eFile/) or an appointment to review the record may be made by writing the Permits and Services Division at the above address.**

Unless a request for a stay of a permit or permit provision is granted by the Environmental Management Commission, the proposed permit contained in the Director's determination shall be issued and effective, and such issuance will be the final administrative action of the Alabama Department of Environmental Management.

d. Appeal Procedures

As allowed under ADEM Admin. Code chap. 335-2-1, any person aggrieved by the Department's final administrative action may file a request for hearing to contest such action. Such requests should be received by the Environmental Management Commission within thirty days of issuance of the permit. Requests should be filed with the Commission at the following address:

Alabama Environmental Management Commission
1400 Coliseum Blvd
(Mailing Address: Post Office Box 301463; Zip 36130-1463)
Montgomery, Alabama 36110-2059

All requests must be in writing and shall contain the information provided in ADEM Admin. Code r. 335-2-1-.04.

ADEM PERMIT RATIONALE

PREPARED DATE: May 3, 2020
PREPARED BY: Alex Chavers
REVISED DATE: November 2, 2020

Permittee Name: WestRock CP, LLC

Facility Name: WestRock CP, LLC - Stevenson

Permit Number: AL0022314

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001:	Process wastewater from paperboard manufacturing, landfill leachate, and stormwater associated with industrial activity
DSN002:	Treated sanitary wastewater
DSN005:	Landfill leachate and stormwater associated with industrial activity
DSN006, DSN022:	Stormwater associated with industrial activity
DSN023:	Process discharges associated with exterior rail car washing operations and stormwater runoff from industrial activity
DSN023A:	Process discharges associated with exterior rail car washing operations
DSN024:	Stormwater and contact water from wet decking operations
DSN025:	Stormwater associated with areas around wet decking operations

INDUSTRIAL CATEGORY: 40 CFR 430: Subpart F – Semi-Chemical Subcateogry (Sodium Base Mills)
40 CFR 430: Subpart J – Secondary Fiber Non-Deink Subcategory

MAJOR: Y

STREAM INFORMATION:

Receiving Stream:	Tennessee River (DSN001, DSN002)
Classification:	Public Water Supply, Swimming, Fish & Wildlife
River Basin:	Tennessee River Basin
7Q10:	5719 CFS
7Q2:	9442 CFS
1Q10:	4289 CFS
Annual Average Flow:	35993 CFS
303(d) List:	YES
Impairment:	Metals (Mercury)
TMDL:	NO

Receiving Stream:	Unnamed Tributary to Tennessee River (DSN005, DSN006, DSN022, DSN023)
Classification:	Fish and Wildlife
River Basin:	Tennessee River Basin
7Q10:	0 CFS

7Q2:	0 CFS
1Q10:	0 CFS
Annual Average Flow:	0.40 CFS
303(d) List:	NO
Impairment:	N/A
TMDL:	NO

Receiving Stream:	Unnamed Tributary to Bengis Creek (DSN024, DSN025)
Classification:	Fish & Wildlife
River Basin:	Tennessee River Basin
7Q10:	0 CFS
7Q2:	0 CFS
1Q10:	0 CFS
Annual Average Flow:	0.64 CFS
303(d) List:	NO
Impairment:	N/A
TMDL:	NO

DISCUSSION:
The facility is an integrated pulp and paper mill that produces corrugated paperboard through a manufacturing process that utilizes wood chips and the non-bleaching neutral sulfite semi-chemical curing process and secondary fibers in a non-deinking process.

ADEM Administrative Rule 335-6-10-.12 requires applicants to new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in which the waters are located. The application submitted by the facility is not for a new or expanded discharge. Therefore, the applicant is not required to demonstrate that the discharge is necessary for economic and social development.

0011:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Oxygen, Dissolved (DO)	-	-	REPORT mg/l	-	-	3X Weekly test	Grab	BPJ
BOD, 5-Day (20 Deg. C)	14461 lbs/day	28902 lbs/day	-	-	-	3X Weekly test	Composite	EGL/ABS
pH	-	-	6.0 S.U.	-	9.0 S.U.	3X Weekly test	Grab	BPJ
Solids, Total Suspended	20205 lbs/day	40410 lbs/day	-	-	-	3X Weekly test	Composite	EGL/ABS
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Nitrogen, Kjeldahl Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Nitrite Plus Nitrate Total 1 Det. (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Phosphorus, Total (As P)	-	-	-	-	REPORT mg/l	Monthly	Composite	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Continuous	Recorder	BPJ
Certification – River Monitoring	-	-	-	-	0 Yes=0; No=1	Monthly	Not Applicable	BPJ

001Q:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Certification - BMP Submittal	-	-	-	-	0 Yes=0; No=1	Quarterly	Not Applicable	BPJ

001Y:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Pentachlorophenol	-	2.58 lbs/day	-	-	-	Annually	Grab	EGL
Trichlorophenol	-	0.98 lbs/day	-	-	-	Annually	Grab	EGL

001T:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Toxicity, Ceriodaphnia Acute	-	0 pass(0)/fail(1)	-	-	-	Annually	Grab	WQBEL
Toxicity, Pimephales Acute	-	0 pass(0)/fail(1)	-	-	-	Annually	Grab	WQBEL

0021:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
BOD, 5-Day (20 Deg. C)	-	-	-	30.0 mg/l	45.0 mg/l	Weekly	Composite	BPJ
pH	-	-	6.0 S.U.	-	9.0 S.U.	Weekly	Grab	BPJ
Solids, Total Suspended	-	-	-	30.0 mg/l	45.0 mg/l	Weekly	Composite	BPJ
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Weekly	Instantaneous	BPJ
Chlorine, Total Residual	-	-	-	-	1.0 mg/l	Monthly	Grab	BPJ
E. Coli	-	-	-	126 col/100mL	235 col/100mL	Weekly	Grab	WQBEL

DSN005Q

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Quarterly	Grab	BPJ
pH	-	-	REPORT S.U.	-	REPORT S.U.	Quarterly	Grab	BPJ
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Quarterly	Grab	BPJ
Oil & Grease	-	-	-	-	15 mg/l	Quarterly	Grab	BPJ
Arsenic, Dissolved (As As)	-	-	-	-	4.22 µg/l	Quarterly	Grab	WQBEL
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Quarterly	Estimate	BPJ
Cyanide, Free Available	-	-	-	-	REPORT µg/l	Quarterly	Grab	WQBEL

DSN006S, DSN022S, DSN023S, DSN025

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Semi-Annually	Grab	BPJ
pH	-	-	REPORT S.U.	-	REPORT S.U.	Semi-	Grab	BPJ

						Annually		
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Semi-Annually	Grab	BPJ
Oil & Grease	-	-	-	-	15 mg/l	Semi-Annually	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Semi-Annually	Estimate	BPJ

DSN023A

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Monthly	Grab	BPJ
pH	-	-	6.0 S.U.	-	8.5 S.U.	Monthly	Grab	BPJ
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Monthly	Grab	BPJ
Oil & Grease	-	-	-	-	15 mg/l	Monthly	Grab	BPJ
Phosphorus, Total (As P)	-	-	-	-	1.0 mg/l	Monthly	Grab	BMP
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Monthly	Estimate	BPJ

0241:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Monthly	Grab	BPJ
pH	-	-	6.0 S.U.	-	9.0 S.U.	Monthly	Grab	EGL
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Monthly	Grab	BPJ
Oil & Grease	-	-	-	-	15 mg/l	Monthly	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Monthly	Estimate	BPJ

*Basis for Permit Limitation

- BPJ – Best Professional Judgment
- WQBEL – Water Quality Based Effluent Limits
- EGL – Federal Effluent Guideline Limitations
- ABS – Anti-backsliding
- 303(d) – 303(d) List of Impaired Waters
- TMDL – Total Maximum Daily Load Requirements

DSN001

Discharges from this outfall include treated process wastewater associated with pulp and paper manufacturing, stormwater from the wood yard, landfill leachate*, and stormwater from the mill process areas.

Landfill Leachate

The facility discharges landfill leachate, which is regulated under 40 CFR 445, from the Upper Leachate Pond through outfall DSN001. 40 CFR 445.1(e) specifies that the regulations therein "do not apply to dischargers of landfill wastewater from landfills operated in conjunction with other industrial or commercial operations when the landfill only receives wastes generated by the industrial or commercial operations directly associated with the landfill."

Best Professional Judgment (BPJ)

pH

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(2)(e)2 – Specific Water Quality for Public Water Supply classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." The discharge is not expected to have a significant effect on the receiving stream due to the low ratio of effluent flow to stream flow; therefore, the existing permit limits will be continued in this permit issuance.

Nutrients

Monitoring for Total Ammonia as Nitrogen, Total Kjeldahl Nitrogen, Nitrates + Nitrites, and Total Phosphorus will be continued in this permit issuance. The proposed frequency is once per month during the growing season (April to October), except for Ammonia, which is to be monitored year-round.

Dissolved Oxygen

Monitoring for this parameter will be continued in this permit issuance. The facility performs river monitoring to ensure that the D.O. in the receiving stream is being maintained above the water quality standard; however, monitoring for D.O. in the discharge can provide valuable information for determining the impact of the discharge and developing future limitations, if necessary.

Water Quality Based Effluent Limits (WQBEL)

Biochemical Oxygen Demand (5-Day)

For this permit issuance, the Department developed a wasteload allocation to ensure the existing permitted load of BOD5 to the receiving stream would not cause a violation of in-stream water quality standards. The model used the highest allowable average load (14,461 lbs/day) and long-term average flow (8.05 MGD) to determine an average concentration of 215.4 mg/l. At this concentration, the model predicted that further assimilative capacity is available; therefore, no additional limitations are proposed for this permit issuance.

Toxicity Testing

The facility will continue to be required to perform whole effluent toxicity testing on an annual basis. Based on the results of a CORMIX model, the instream waste concentration is 15.2% and the limiting dilution is greater than 100:1; therefore, testing will be required on an acute basis at an IWC of 16%.

Reasonable Potential Analysis

A reasonable potential analysis was performed using analytical data submitted with the application for DSN001. No reasonable potential was shown for pollutants discharge at DSN001 to violate water quality standards; therefore, no additional limitations are proposed to be included in this permit issuance.

Federal Effluent Guideline Limitations (EGL)
The facility is subject to 40 CFR 430: Subparts F and J. A summary of the determination of effluent guideline limitations can be found in Attachment A to this rationale.

Biochemical Oxygen Demand (5-Day), Total Suspended Solids
The facility's discharge at DSN001 is subject to the effluent limitation guidelines found at 40 CFR 430.62 and 40 CFR 430.102, the sum of which provides production-based guidelines for determining allowable loadings. The current permit limitations have been continued since 1995 to avoid anti-backsliding.

The facility has requested an increase to the allowable loadings in the discharge based on a sustained production increase and available assimilative capacity in the receiving stream. Based on information available to the Department, the facility has consistently been able to meet the current permit limitations and has not demonstrated a need for additional allocation; therefore, it is proposed to continue the existing limitations in this permit issuance.

Pentachlorophenol*, Trichlorophenol*
These parameters are regulated under 40 CFR 430.64 and 40 CFR 430.104. The sum of these two guidelines provides the final limitations applicable to the discharge; however, the existing permit limitations are more stringent and will be continued in this permit issuance.

*In lieu of monitoring for these parameters, the facility can submit an annual certification of non-use as described at 40 CFR 430.02(f) by reporting a value of *9 on the discharge monitoring report

303(d) List of Impaired Waters/Total Maximum Daily Load (TMDL)
The receiving stream is listed on the 2018 303(d) List of Impaired Waters for Metals (Mercury). The discharge is not expected to contain mercury in amounts that would cause or contribute to the existing impairment; therefore, no additional limitations are proposed for this permit issuance.

Stream Monitoring Requirements
The facility is required to conduct river monitoring surveys on a periodic basis for the period from June through September inclusive. The specific details of the river monitoring requirements can be found in Part IV.F of the permit. The previous permit included language that made river surveys required outside of the period noted above if the flow was below a certain threshold; however, this language was updated to require river surveys only during the period noted above, regardless of river flow.

316(b) Cooling Water Intake Structure Requirements
Section 316(b) of the Clean Water Act requires that facilities minimize adverse environmental impacts resulting from the operation of cooling water intake structures (CWIS) by using the "best technology available" (BTA). U.S. EPA has promulgated rules to implement these requirements under Phase I, Phase II, and Phase III of the rules; however, many facilities that operate intake structures do not fall into these categories and are therefore classified as miscellaneous facilities. For these miscellaneous facilities, a BTA determination must be made using BPJ.

The cooling water intake structure (CWIS) used by the permittee has been evaluated using available information. At this time, the Department has determined, using BPJ, that the cooling water intake structure represents the best technology available (BTA) to minimize adverse environmental impact in accordance with Section 316 (b) of the Federal Clean Water Act (33 U.S.C. section 1326) due to the actual through screen intake flow velocity being equal to 0.5 ft/s, the use of fish detraction technology (i.e. rotating screen) and the design intake flow is less than 5% of the mean annual flow.

The requirements that facilities must comply with are listed below:

1. The permittee shall submit the following information at least 180 days prior to expiration of this permit:
   - design in-take flow of the CWIS;
   - percentage of in-take flow, based on highest monthly average in last 5 years, used for cooling purposes;

- an estimate of the in-take flow reduction at the facility based upon the use of a 100 percent (or some lesser percentage) closed-cycle re-circulating cooling water system compared to a conventional once-through cooling water system;
- through screen design in-take flow velocity;
- any impingement and entrainment data that may have been collected based on the operation of the facility's CWIS, collected since the effective date of this NPDES permit; and,
- a detailed description of any changes in the operation of the CWIS, or changes in the type of technologies used at the CWIS such as screens or other technologies affecting the rates of impingement and/or entrainment of fish and shellfish.

2. The permittee is required to operate and maintain the CWIS in a manner that minimizes impingement and entrainment levels. Documentation detailing the steps that have and are being taken to minimize the impingement and entrainment levels shall be maintained on site and made available upon request.

3. The Permittee must keep records of all submissions that are part of the permit application pertaining to the CWIS until the subsequent permit is issued to the Permittee.

4. Nothing in this Permit authorizes take for the purposes of a facility compliance with the Endangered Species Act.

DSN002

Discharges from this outfall include treated sanitary wastewater from the mill site at a rate of 4,000 GPD. Treatment for this discharge includes screening, grinding, activated sludge, and disinfection.

Biochemical Oxygen Demand (5-Day), Total Suspended Solids

Monthly average limitations for these parameters are based on secondary treatment standards. Daily maximum limitations were determined, based on Departmental policy, by multiplying the monthly average by a factor of 1.5.

pH

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(2)(e)2 – Specific Water Quality for Public Water Supply classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." Based on the low effluent flow to stream flow ratio, the discharge is not expected to have a significant effect on the pH of the receiving stream; therefore, it is proposed to continue the existing limitations of 6.0 to 9.0 S.U.

Total Residual Chlorine (TRC)

Chlorine is used in the disinfection process; therefore, monitoring for TRC will be continued in this permit issuance. The maximum TRC allowed in order to preserve the in-stream water quality standard of 0.011 mg/L is greater than 1.0 mg/L; therefore, the existing limitation is proposed to be continued in this permit issuance.

E. Coli

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(6)ii – Specific Water Quality Criteria for Swimming and Other Whole Body Water-Contact Sports, states that " the bacterial quality of water is acceptable when a sanitary survey by the controlling authorities reveals no source of dangerous pollution and when the geometric mean E. coli organism density does not exceed 126 colonies/100 mL in non-coastal waters nor exceed a maximum of 235 colonies/100 ml in any sample in non-coastal waters." Therefore, the existing limitations are proposed to be continued in this permit issuance.

Reasonable Potential Analysis

A reasonable potential analysis was performed using analytical data submitted with the application for DSN002. No reasonable potential was shown for pollutants discharge at DSN002 to violate water quality standards; therefore, no additional limitations are proposed to be included in this permit issuance.

DSN005 (Revised November 2, 2020)

Discharges from DSN005 include stormwater and landfill leachate*. DSN005 has similar requirement to stormwater outfalls; however, due to the inclusion of landfill leachate, the monitoring frequency is proposed at *once per quarter* and additional monitoring is being proposed based on the reasonable potential analysis.

**DSN005 (Landfill Leachate)*

The facility discharges landfill leachate, which is regulated under 40 CFR 445, from the Lower Leachate Pond through outfall DSN005. 40 CFR 445.1(e) specifies that the regulations therein "do not apply to dischargers of landfill wastewater from landfills operated in conjunction with other industrial or commercial operations when the landfill only receives wastes generated by the industrial or commercial operations directly associated with the landfill."

Flooded Conditions

DSN005's location is being modified to be as far downstream of any treatment prior to comingling with a water of the state. The proposed location is at risk of being inaccessible during certain months of the year due to flooding; however, the proposed quarterly monitoring frequency should allow the facility to obtain a sample during each required reporting period. In the event a sample can not be obtained during a quarter, the facility shall obtain a sample at an alternative upstream sampling location.

pH, Biochemical Oxygen Demand (5-Day), Total Suspended Solids

Monitoring for these parameters will be continued to provide a measure of the effectiveness of the facility's BMP plans.

Oil & Grease

The daily maximum limitation will be continued in this permit issuance. The limitation is consistent with similar discharges, achievable with BMPs and has been shown to prevent the occurrence of a sheen in the receiving stream.

Water Quality Based Effluent Limits (Dissolved Arsenic, Available Cyanide)

A reasonable potential analysis was performed using analytical data submitted with the application for DSN005. While DSN005 is primarily a stormwater driven discharge, there is the potential for the outfall to discharge outside of storm events when stream flows may not be elevated; therefore, water quality based effluent limitations will be applied at DSN005 for these pollutants.

Limited data submitted with the application indicated a reasonable potential for cyanide to cause a violation of water quality standards; however, additional data shows that cyanide is not present in significant amounts and a reasonable potential does not exist. Monitoring is proposed to continue to evaluate the presence of cyanide; however, at this time no limitations are proposed.

The reasonable potential analysis indicates that the discharge has the potential to violation the human health criteria for dissolved arsenic; therefore, this will be placed as an end of pipe limit for the daily maximum.

Stormwater Monitoring (DSN006, DSN022, DSN023, DSN025)

The previous permit identified outfalls DSN003 through DSN023 as stormwater outfalls with monitoring required at DSN005, DSN006, DSN022, and DSN023. Outfalls DSN003, DSN004, and DSN007 through DSN021 are considered internal stormwater points and all stormwater that flows through these points discharges through DSN023; therefore, it is proposed to remove internal stormwater points from this permit issuance. Additionally, DSN025 (previously DSN001-1 under ALG060506) will be added to stormwater monitoring points to cover stormwater runoff from areas around the Wet Yard.

pH, Biochemical Oxygen Demand (5-Day), Total Suspended Solids
Monitoring for these parameters will be continued to provide a measure of the effectiveness of the facility's BMP plans.

Oil & Grease
The daily maximum limitation will be continued in this permit issuance. The limitation is consistent with similar discharges, achievable with BMPs and has been shown to prevent the occurrence of a sheen in the receiving stream.

DSN023
DSN023 is currently permitted to discharge stormwater only under NPDES Permit AL0022314 and rail car exterior wash water under NPDES Permit ALG141308 (listed as outfall DSN0071). It is proposed to include the discharge of rail car exterior wash water through outfall DSN023 in this permit issuance. Discharges of wash water during non-stormwater events should be monitored according to the requirements listed for DSN023A.

pH
Monitoring for pH will be continued in this permit issuance. Discharges during non-stormwater events, which should be analyzed and submitted under DSN023A will continue to be limited for pH at 6.0 and 8.5 S.U. for the daily minimum and daily maximum, respectively.

Biochemical Oxygen Demand (5-Day), Total Suspended Solids
Monitoring for these parameters will be continued to provide a measure of the effectiveness of the facility's BMP plans.

Oil & Grease
The daily maximum limitation will be continued in this permit issuance. The limitation is consistent with similar discharges, achievable with BMPs and has been shown to prevent the occurrence of a sheen in the receiving stream

DSN023A
DSN023 is currently permitted to discharge stormwater only under NPDES Permit AL0022314 and rail car exterior wash water under NPDES Permit ALG141308 (listed as outfall DSN0071). It is proposed to include the discharge of rail car exterior wash water through outfall DSN023 in this permit issuance. Discharges of wash water during non-stormwater events should be monitored according to the requirements listed for DSN023A.

pH
Discharges during non-stormwater events will be limited to a daily minimum and daily maximum of 6.0 and 8.5 S.U., respectively.

Biochemical Oxygen Demand (5-Day), Total Suspended Solids
Monitoring for these parameters will be continued to provide a measure of the effectiveness of the facility's BMP plans.

Oil & Grease
The daily maximum limitation will be continued in this permit issuance. The limitation is consistent with similar discharges, achievable with BMPs and has been shown to prevent the occurrence of a sheen in the receiving stream

Phosphorus
Discharges of rail car exterior wash water are limited to 1.0 mg/L in the current permit and this limitation will be continued in this permit issuance. This limitation has been applied to similar discharges and has been shown to be achievable using BMPs.

DSN024
Discharges from this outfall are currently permitted under NPDES General Permit ALG060506 as DSN002-1; however, it was requested to include this coverage in this permit issuance. The discharge includes stormwater, and contact water from wet log storage operations. Discharges from the settling pond typically occur during and/or following a rain event. Following issuance of this permit, the permittee should request termination of ALG060506.

A monitoring frequency of once per month is proposed for this permit issuance.

pH
40 CFR 429.101 (BPT) and 40 CFR 429.103 (BAT) require a daily minimum and maximum limitation of 6.0 and 9.0 S.U., respectively.

Biochemical Oxygen Demand (5-Day), Total Suspended Solids
Based on information available to the Department, monitoring for these parameters will continue to be monitored to assess the effectiveness of the facility's BMP plans and provide loading information to determine future limitations, if necessary.

Oil & Grease
The daily maximum limitation of 15 mg/L will be continued in this permit issuance. The limitation is consistent with similar discharges, achievable with BMPs and has been shown to prevent the occurrence of a sheen in the receiving stream.

Narrative Criteria
40 CFR 429.101 and 40 CFR 429.103 both require that there shall be no debris, as defined at 40 CFR 429.11(i), discharged.

Best Management Practices (BMPs) are believed to be the most effective way to control the contamination of stormwater from areas of industrial activities. This facility is required to maintain a BMP plan. The requirements of the BMP plan call for minimization of stormwater contact with waste materials, products and by-products, and for prevention of spills or loss of fluids from equipment maintenance activities. The effectiveness of the BMPs will be measured through the monitoring of the pollutants of concern.

Revision (November 2, 2020)
Based on comments received by the facility, the Department has made the following revisions to the permit and/or rationale:

- The River Monitoring Certification parameter was modified to reflect the June to September period required by Part IV of the permit.
- Part I of the permit was modified to include footnotes specifying the test method for the parameter "Cyanide, Free Available".
- BMP Submittal certification requirements were removed from Part I.A of the Permit. The facility is not subject to the BMP requirements for spent pulping, liquor, soap, and turpentine and, therefore, not subject to quarterly submittals required therein.
- DSN005 was modified as follows:
    - Limitations for Cyanide, Free Available were removed due to additional sampling, which did not show a reasonable potential for the discharge to cause a violation of water quality standards in the receiving stream.
    - The monitoring frequency was changed to quarterly to account for a location change in DSN005, which is necessary for the facility to comply with new dissolved arsenic limitations. The new location has the potential to be inaccessible during several months of the year due to flooding; a quarterly frequency should provide adequate characterization of the discharge and reduce the risk of the facility being unable to obtain a sample. An alternative sampling location can be used if the new location is inaccessible for an entire monitoring period.

ATTACHMENT A: EFFLUENT GUIDELINE LIMITATIONS

Permit Limits Summary

Pollutant	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*	*Basis*
Current Permit			
BOD5 (Total)	28,902	14,461	1995 Permit Production
TSS (Total)	40,410	20,205	1995 Permit Production
Pentachlorophenol	2.58	-	1995 Permit Production
Trichlorophenol	0.98	-	1995 Permit Production
Renewal Application			
BOD5 (Subpart F)	25,224	12,612	January 2017 to December 2017 Production
BOD5 (Subpart J)	13,096	6,433	January 2017 to December 2017 Production
BOD5 (Total)	38,320	19,045	
TSS (Subpart F)	31,892	15,946	January 2017 to December 2017 Production
TSS (Subpart J)	21137	10569	January 2017 to December 2017 Production
TSS (Total)	53029	26515	
Pentachlorophenol	5.48	-	January 2017 to December 2017 Production
Trichlorophenol	1.9	-	January 2017 to December 2017 Production
Final Permit Limitations			

2014 Issuance Calculations

40 CFR 430 - Pulp and Paper Production Point Source Category

Subpart F - Semi-Chemical Subcategory
40 CFR 430.62 - Best Practicable Technology (BPT)/Best Conventional Technology (BCT)

BPT effluent limitations for sodium base mills
Production Unk tons/day
- lbs/day

*Pollutant**	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
BOD_5	8.7	4.35	Unk	Unk
TSS	11	5.5	Unk	Unk

*pH within the range of 5.0 to 9.0 S.U.

40 CFR 430.64

Pollutant	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
Pentachlorophenol	0.0012	-	Unk	-
Trichlorophenol	0.00043	-	Unk	-

Subpart J - Secondary Fiber Non-Deink Subcategory
40 CFR 430.102 - Best Practicable Technology (BPT)/Best Conventional Technology (BCT)

BPT effluent limitations for secondary fiber non-deink facilities where paperboard from wastepaper is produced - corrugating medium finish subdivision
Production Unk tons/day
- lbs/day

*Pollutant**	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
BOD_5	5.7	2.8	Unk	Unk
TSS	9.2	4.6	Unk	Unk

*pH within the range of 5.0 to 9.0 S.U.

40 CFR 430.104

Pollutant	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
Pentachlorophenol	0.00087	-	Unk	-
Trichlorophenol	0.0003	-	Unk	-

Total Allocations

Pollutant	Daily Maximum	
	Daily Maximum (lbs/day)	*Monthly Average (lbs/day)*
BOD_5	28902	14461
TSS	40410	20205
Pentachlorophenol**	2.58	-
Trichlorophenol**	0.98	-

*pH within the range of 5.0 to 9.0 S.U.

**The current permit is based on the limtations developed in 1995 and have been continued in all subsequent issuance to prevent backsliding

Renewal Application

40 CFR 430 - Pulp and Paper Production Point Source Category

Subpart F - Semi-Chemical Subcategory
40 CFR 430.62 - Best Practicable Technology (BPT)/Best Conventional Technology (BCT)

BPT effluent limitations for sodium base mills
Production 1449.65 tons/day
2,899,300 lbs/day

*Pollutant**	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
BOD_5	8.7	4.35	25224	12612
TSS	11	5.5	31892	15946

*pH within the range of 5.0 to 9.0 S.U.

40 CFR 430.64

Pollutant	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
Pentachlorophenol	0.0012	-	3.48	-
Trichlorophenol	0.00043	-	1.25	-

Subpart J - Secondary Fiber Non-Deink Subcategory
40 CFR 430.102 - Best Practicable Technology (BPT)/Best Conventional Technology (BCT)

BPT effluent limitations for secondary fiber non-deink facilities where paperboard from wastepaper is produced - corrugating medium finish subdivision
Production 1148.76 tons/day
2,297,520 lbs/day

*Pollutont**	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
BOD_5	5.7	2.8	13096	6433
TSS	9.2	4.6	21137	10569

*pH within the range of 5.0 to 9.0 S.U.

40 CFR 430.104

Pollutant	Continuous Discharges		Cluster Limitations	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
Pentachlorophenol	0.00087	-	2.00	-
Trichlorophenol	0.0003	-	0.69	-

Total Allocations

Pollutant	Daily Maximum	
	Daily Maximum (lbs/day)	*Monthly Average (lbs/day)*
BOD_5	38320	19045
TSS	53029	26515
Pentachlorophenol**	5.48	-
Trichlorophenol**	1.94	-

*pH within the range of 5.0 to 9.0 S.U.

ATTACHMENT B: REASONABLE POTENTIAL ANALYSIS

Facility Name: **Westrock Mill Company - Stevenson (DSN001)**

NPDES No.: **AL0022314**

9/13/2017

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	**Enter** Max Daily Discharge as reported by Applicant (C_d) Max	**Enter** Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Stream / Lake)
				µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	5.03	5.03	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	4.44	4.44	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	3.38	3.38	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	13.7	13.7	0.388
8	Lead**		Metals	0	0	0	0	4.98	4.98	0.206
9	Mercury**		Metals	0	0	0	0	0	0	0.302
10	Nickel**		Metals	0	0	0	0	9.22	9.22	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	41	71.1	0.330
15	Cyanide		Metals	0	0	0	0	17	17	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**ChloroForm***	YES	VOC	0	0	0	0	0	0	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4,4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobromo-Methane***	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichlorethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dintro-2-methylophenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlerobenzidine***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

8.05	Enter Q_d = wastewater discharge flow from facility (MGD)
12.4551935	Q_d = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	**Enter flow from upstream discharge** Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
5719	**Enter 7Q10,** Q_s = background stream flow in cfs above point of discharge
4289	**Enter or estimated, 1Q10,** Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
35993	**Enter Mean Annual Flow.** Q_s = background stream flow in cfs above point of discharge
9442	**Enter 7Q2,** Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
$Q_d + Qd2 + Q_s$	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

November 3, 2020

Facility Name: Westrock Mill Company - Stevenson (DSN001)

NPDES No.: AL0022314

						Freshwater Acute ($\mu g/l$) Q_s =1Q10						Freshwater Chronic ($\mu g/l$) Q_s = 7Q10				Human Health Consumption Fish only (ug/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
Freshwater F&W classification.					Max Daily Discharge as reported by Applicant (C_{max})						Avg Daily Discharge as reported by Applicant (C_{avg})								
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max		Water Quality Criteria (C_s)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave		Water Quality Criteria (C_s)	Draft Permit Limit (C_{avg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_s)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?
1	Antimony			0	5.03	-	-	-	-	0	5.03	-	-	-	-	3.73E+02	1.72E+05	3.44E+04	No
2	Arsenic		YES	0	4.44	592.334	204565.292	40913.058	No	0	4.44	281.324	120252.411	24050.482	No	3.03E-01	8.76E+02	1.75E+02	No
3	Berylium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	2946.821	589.364	No	0	0	1.042	479.657	95.931	No	-	-	-	-
5	Chromium/ Chromium III			0	3.38	2713.159	937001.391	187400.278	No	0	3.38	352.826	162404.643	32480.929	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	5525.670	1105.134	No	0	0	11.000	5061.825	1012.365	No	-	-	-	-
7	Copper			0	13.7	34.637	11962.000	2392.400	No	0	13.7	23.082	10621.472	2124.294	No	-	-	-	-
8	Lead			0	4.98	313.502	108269.227	21653.845	No	0	4.98	12.217	5621.717	1124.343	No	-	-	-	-
9	Mercury			0	0	2.400	828.850	165.770	No	0	0	0.012	5.522	1.104	No	4.24E-02	1.95E+01	3.90E+00	No
10	Nickel			0	9.22	927.200	320212.400	64042.480	No	0	9.22	102.983	47369.377	9477.875	No	9.93E+02	4.57E+05	9.14E+04	No
11	Selenium			0	0	20.000	6907.087	1381.417	No	0	0	5.000	2300.829	460.166	No	2.43E+03	1.12E+06	2.24E+05	No
12	Silver			0	0	3.217	1110.921	222.184	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.26E+02	2.52E+01	No
14	Zinc			0	41	355.062	122632.664	24526.533	No	0	71.1	357.937	164737.974	32947.595	No	1.49E+04	6.85E+06	1.37E+06	No
15	Cyanide			0	17	22.000	7597.796	1519.559	No	0	17	5.200	2392.863	478.573	No	9.33E+03	4.29E+06	8.59E+05	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	2.50E+03	4.99E+02	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	4.16E+02	8.33E+01	No
20	Aldrin		YES	0	0	3.000	1036.063	207.213	No	0	0	-	-	-	-	2.94E-05	8.50E-02	1.70E-02	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	4.47E+04	8.95E+03	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	2.28E+05	4.55E+04	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	2.77E+03	5.53E+02	No
24	Chlordane		YES	0	0	2.400	828.850	165.770	No	0	0	0.0043	1.979	0.396	No	4.73E-04	1.37E+00	2.73E-01	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.08E+02	4.17E+05	8.34E+04	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	2.14E+04	4.28E+03	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+02	2.95E+05	5.90E+04	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	5.24E-01	1.05E-01	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	3.70E-01	7.40E-02	No
32	4,4' - DDT		YES	0	0	1.100	379.890	75.978	No	0	0	0.001	0.460	0.092	No	1.28E-04	3.70E-01	7.40E-02	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	2.90E+04	5.80E+03	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	6.18E+04	1.24E+04	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	2.72E+06	5.44E+05	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	1.20E+07	2.41E+06	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.46E+00	3.91E+03	7.82E+02	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	5.65E+03	1.13E+03	No
40	Dieldrin		YES	0	0	0.240	82.885	16.577	No	0	0	0.056	25.769	5.154	No	3.12E-05	9.03E-02	1.81E-02	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	5.73E+05	1.15E+05	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	4.01E+05	8.02E+04	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	9.99E+05	2.00E+05	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	6.75E+03	1.35E+03	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	5.54E+03	1.11E+03	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	4.01E+06	8.03E+05	No
48	Toxaphene		YES	0	0	0.730	252.109	50.422	No	0	0	0.0002	0.092	0.018	No	1.62E-04	4.68E-01	9.36E-02	No
49	Tributyltin (TBT)		YES	0	0	0.460	158.863	31.773	No	0	0	0.072	33.132	6.626	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	2.63E+04	5.26E+03	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	5.05E+04	1.01E+04	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	4.12E+03	8.24E+02	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	4.01E+04	8.01E+03	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	7.91E+04	1.58E+04	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	2.29E+05	4.58E+04	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.43E+06	2.86E+05	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	4.78E+05	9.57E+04	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	7.71E-05	1.54E-05	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	3012.637	602.527	No	0	0	9.693	3079.699	615.940	No	1.77E+00	5.11E+03	1.02E+03	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	2.30E+08	4.60E+07	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	4.09E+03	8.18E+02	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	2.66E+05	5.32E+04	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	1.07E+07	2.15E+06	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	5.34E-02	1.07E-02	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.08E+01	6.16E+00	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.08E+01	6.16E+00	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.90E+00	9.81E-01	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.90E+00	9.81E-01	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	8.89E+02	1.78E+02	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	1.74E+07	3.48E+06	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	3.71E+03	7.41E+02	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	5.19E+05	1.04E+05	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	4.25E+05	8.50E+04	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.08E+01	6.16E+00	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E-03	1.21E+06	2.41E+05	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.08E+01	6.16E+00	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	3.48E+05	6.95E+04	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	2.59E+05	5.18E+04	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	5.18E+04	1.04E+04	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	4.80E+01	9.61E+00	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.18E+07	2.35E+06	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+06	2.98E+08	5.97E+07	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.96E+00	5.73E+03	1.15E+03	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	5.39E+01	1.08E+01	No
97	Endosulfan (alpha)		YES	0	0	0.22	75.978	15.196	No	0	0	0.056	25.769	5.154	No	5.19E+01	1.50E+05	3.00E+04	No
98	Endosulfan (beta)		YES	0	0	0.22	75.978	15.196	No	0	0	0.056	25.769	5.154	No	5.19E+01	1.50E+05	3.00E+04	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	1.50E+05	3.00E+04	No
100	Endrin		YES	0	0	0.086	29.700	5.940	No	0	0	0.036	16.566	3.313	No	3.53E-02	1.02E+02	2.04E+01	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.78E-01	5.10E+02	1.02E+02	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	3.73E+04	7.47E+03	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.43E+06	2.86E+05	No
104	Heptochlor		YES	0	0	0.52	179.584	35.917	No	0	0	0.0038	1.749	0.350	No	4.63E-05	1.34E-01	2.68E-02	No
105	Heptachlor Epoxide		YES	0	0	0.52	179.584	35.917	No	0	0	0.0038	1.749	0.350	No	2.29E-05	6.62E-02	1.32E-02	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	4.85E-01	9.70E-02	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	3.11E+04	6.22E+03	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.86E-03	8.24E+00	1.65E+00	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	2.88E+01	5.77E+00	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	328.087	65.617	No	0	0	-	-	-	-	1.08E+00	3.11E+03	6.23E+02	No
111	HexachlorocyclePentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	2.97E+05	5.94E+04	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	8.83E+02	1.77E+02	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.08E+01	6.16E+00	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	2.58E+05	5.16E+04	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	1.86E+05	3.72E+04	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	8.53E+02	1.71E+02	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	5.09E+03	1.02E+03	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	1.01E+04	2.02E+03	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288	No	3.74E-05	1.08E-01	2.16E-02	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288	No	3.74E-05	1.08E-01	2.16E-02	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288	No	3.74E-05	1.08E-01	2.16E-02	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288	No	3.74E-05	1.08E-01	2.16E-02	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288	No	3.74E-05	1.08E-01	2.16E-02	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288	No	3.74E-05	1.08E-01	2.16E-02	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288	No	3.74E-05	1.08E-01	2.16E-02	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	1.07E+06	2.15E+05	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	1.88E+04	3.77E+03	No

Facility Name: Westrock Mill Company - Stevenson (DSN001)

NPDES No.: AL0022314

Freshwater PWS classification.					Max Daily Discharge as reported by Applicant (C_{max})	Freshwater Acute (µg/l) Q_s =1Q10				Avg Daily Discharge as reported by Applicant (C_{avg})	Freshwater Chronic (µg/l) Q_s = 7Q10				Human Health Consumption Fish & Water (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max		Water Quality Criteria (C_1)	Draft Permit Limit (C_{draft})	20% of Draft Permit Limit	RP?		Water Quality Criteria (C_1)	Draft Permit Limit (C_{draft})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_1)	Draft Permit Limit (C_{draft})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_1)	Draft Permit Limit (C_{draft})	20% of Draft Permit Limit	RP?
1	Antimony			0	5.03	-	-	-	-	0	5.03	-	-	-	5.52E+00	2.54E+03	5.08E+02	No	3.73E+02	1.72E+05	3.44E+04	No
2	Arsenic		YES	0	4.44	592.334	204565.292	40913.05848	No	0	4.44	261.324	120252.411	24050.48212	No	1.20E-01	3.46E+02	6.97E+01	No	3.03E-01	8.76E+02	1.75E+02	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	2946.821	589.3642322	No	0	0	1.042	479.657	95.93146246	No	-	-	-	-	-	-	-	-
5	Chromium/ Chromium III			0	3.36	2713.156	937001.391	187400.2783	No	0	3.36	352.926	162404.643	32480.92867	No	-	-	-	-	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	5525.670	1105.133909	No	0	0	11.000	5061.825	1012.364981	No	-	-	-	-	-	-	-	-
7	Copper			0	13.7	34.637	11962.000	2392.40009	No	0	13.7	23.082	10621.472	2124.294473	No	1.30E+03	5.98E+05	1.20E+05	No	-	-	-	-
8	Lead			0	4.98	313.502	108269.227	21653.84546	No	0	4.98	12.217	5621.717	1124.343303	No	-	-	-	-	-	-	-	-
9	Mercury			0	0	2.400	828.850	165.7700863	No	0	0	0.012	5.522	1.104398139	No	4.19E-02	1.93E+01	3.86E+00	No	4.24E-02	1.95E+01	3.90E+00	No
10	Nickel			0	9.22	927.200	320212.400	64042.48005	No	0	9.22	102.963	47389.377	9477.875465	No	4.11E+02	1.89E+05	3.78E+04	No	9.93E+02	4.57E+05	9.14E+04	No
11	Selenium			0	0	20.000	6907.087	1381.417386	No	0	0	5.000	2300.829	460.1658912	No	1.63E+02	7.51E+04	1.50E+04	No	2.43E+03	1.12E+06	2.24E+05	No
12	Silver			0	0	3.217	1110.921	222.1842203	No	0	0	-	-	-	-	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
14	Zinc			0	41	355.092	122632.564	24526.53282	No	0	71.1	357.997	164737.974	32947.59486	No	1.74E-01	7.99E+01	1.60E+01	No	2.74E-01	1.26E+02	2.52E+01	No
15	Cyanide			0	17	22.000	7597.796	1519.559124	No	0	17	5.200	2392.863	478.5725256	No	6.16E+03	2.83E+06	5.67E+05	No	1.49E+04	6.85E+06	1.37E+06	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	1.38E+02	6.35E+04	1.27E+04	No	9.33E+03	4.29E+06	8.59E+05	No
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.14E+00	1.91E+03	3.81E+02	No	5.43E+00	2.50E+03	4.99E+02	No
20	Aldrin		YES	0	0	3.000	1036.063	207.2126079	No	0	0	-	-	-	-	4.47E-02	1.28E+02	2.58E+01	No	1.44E-01	4.16E+02	8.33E+01	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.90E-05	8.38E-02	1.68E-02	No	2.94E-05	8.50E-02	1.70E-02	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.12E+00	3.24E+03	6.47E+02	No	1.55E+01	4.47E+04	8.95E+03	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.19E+00	1.21E+04	2.43E+03	No	7.88E+01	2.28E+05	4.55E+04	No
24	Chlordane		YES	0	0	2.400	828.850	165.7700863	No	0	0	0.0043	1.979	0.395742668	No	2.10E-01	6.07E+02	1.21E+02	No	9.57E-01	2.77E+03	5.53E+02	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.71E-04	1.36E+00	2.72E-01	No	4.73E-04	1.37E+00	2.73E-01	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.21E+02	5.56E+04	1.12E+04	No	9.06E+02	4.17E+05	8.34E+04	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	3.94E-01	1.14E+03	2.28E+02	No	7.41E+00	2.14E+04	4.28E+03	No
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	1.57E+04	3.14E+03	No	1.02E+02	2.95E+05	5.90E+04	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	5.24E-01	1.05E-01	No	1.81E-04	5.24E-01	1.05E-01	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	3.70E-01	7.39E-02	No	1.28E-04	3.70E-01	7.40E-02	No
32	4,4' - DDT		YES	0	0	1.100	379.890	75.97795621	No	0	0	0.001	0.460	0.092033178	No	1.28E-04	3.70E-01	7.39E-02	No	1.28E-04	3.70E-01	7.40E-02	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.34E-01	1.54E+03	3.09E+02	No	1.00E+01	2.90E+04	5.80E+03	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.78E-01	1.09E+03	2.18E+02	No	2.14E+01	6.18E+04	1.24E+04	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	1.37E+01	6.29E+03	1.26E+03	No	5.91E+03	2.72E+06	5.44E+05	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.23E+02	9.33E+05	1.87E+05	No	4.17E+03	1.20E+07	2.41E+06	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	4.92E-01	2.26E+02	4.53E+01	No	8.49E+00	3.91E+03	7.82E+02	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	3.40E-01	1.57E+02	3.13E+01	No	1.23E+01	5.65E+03	1.13E+03	No
40	Dieldrin		YES	0	0	0.240	82.885	16.57700863	No	0	0	0.056	25.769	5.153857981	No	3.08E-05	8.90E-02	1.78E-02	No	3.12E-05	9.03E-02	1.81E-02	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.48E+02	2.06E+05	4.12E+04	No	1.24E+03	5.73E+05	1.15E+05	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	4.64E+01	2.13E+04	4.27E+03	No	8.71E+02	4.01E+05	8.02E+04	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.60E+00	1.33E+04	2.66E+03	No	3.46E+02	9.99E+05	2.00E+05	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.63E-01	4.71E+02	9.41E+01	No	2.33E+00	6.75E+03	1.35E+03	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.03E-01	1.74E+03	3.49E+02	No	1.92E+00	5.54E+03	1.11E+03	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	1.21E+03	5.55E+05	1.11E+05	No	8.72E+03	4.01E+06	8.03E+05	No
48	Toxaphene		YES	0	0	0.730	252.109	50.42173458	No	0	0	0.0002	0.092	0.018406636	No	1.61E-04	4.66E-01	9.31E-02	No	1.62E-04	4.66E-01	9.36E-02	No
49	Tributyltin (TBT)		YES	0	0	0.460	158.863	31.77259867	No	0	0	0.072	33.132	6.626386833	No	-	-	-	-	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.75E-01	1.66E+03	3.33E+02	No	9.10E+00	2.63E+04	5.26E+03	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.40E+00	6.93E+03	1.39E+03	No	1.75E+01	5.05E+04	1.01E+04	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.48E-02	7.10E+01	1.42E+01	No	1.42E+00	4.12E+03	8.24E+02	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	5.81E+01	2.88E+04	5.35E+03	No	8.71E+01	4.01E+04	8.01E+03	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	6.52E+01	3.00E+04	6.00E+03	No	1.72E+02	7.91E+04	1.58E+04	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	2.91E+02	1.34E+05	2.68E+04	No	4.96E+02	2.29E+05	4.58E+04	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	6.85E+01	3.15E+04	6.30E+03	No	3.11E+03	1.43E+06	2.86E+05	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.26E+01	3.65E+04	7.29E+03	No	1.65E+02	4.78E+05	9.57E+04	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.63E-08	7.61E-05	1.52E-05	No	2.67E-08	7.71E-05	1.54E-05	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	3012.637	602.5273561	No	0	0	6.693	3079.699	615.9397467	No	2.50E-01	7.24E+02	1.45E+02	No	1.77E+00	5.11E+03	1.02E+03	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	1.03E+04	4.73E+06	9.46E+05	No	5.00E+05	2.30E+08	4.60E+07	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.79E-01	2.83E+03	5.66E+02	No	1.41E+00	4.09E+03	8.18E+02	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	4.54E+02	2.09E+05	4.17E+04	No	5.79E+02	2.66E+05	5.32E+04	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	7.24E+03	3.33E+06	6.66E+05	No	2.33E+04	1.07E+07	2.15E+06	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	6.58E-05	3.03E-02	6.06E-03	No	1.16E-04	5.34E-02	1.07E-02	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	9.56E+00	1.91E+00	No	1.07E-02	3.08E+01	6.16E+00	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	9.56E+00	1.91E+00	No	1.07E-02	3.08E+01	6.16E+00	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.52E+00	3.04E-01	No	1.07E-02	4.90E+00	9.81E-01	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.52E+00	3.04E-01	No	1.07E-02	4.90E+00	9.81E-01	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.88E-02	8.34E+01	1.67E+01	No	3.07E-01	8.86E+02	1.78E+02	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	1.35E+03	6.21E+05	1.24E+05	No	3.78E+04	1.74E+07	3.48E+06	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.47E-01	2.45E+03	4.90E+02	No	1.28E+00	3.71E+03	7.41E+02	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	9.71E+02	4.47E+05	8.94E+04	No	1.13E+03	5.19E+05	1.04E+05	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	6.95E+02	3.20E+05	6.39E+04	No	9.24E+02	4.25E+05	8.50E+04	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	9.56E+00	1.91E+00	No	1.07E-02	3.08E+01	6.16E+00	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.50E+03	6.90E+05	1.38E+05	No	2.62E+03	1.21E+06	2.41E+05	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	9.56E+00	1.91E+00	No	1.07E-02	3.08E+01	6.16E+00	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	3.44E+02	1.58E+05	3.16E+04	No	7.55E+02	3.48E+05	6.95E+04	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+02	1.18E+05	2.35E+04	No	5.62E+02	2.59E+05	5.18E+04	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.11E+01	2.35E+04	4.71E+03	No	1.12E+02	5.18E+04	1.04E+04	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.37E-02	3.96E+01	7.92E+00	No	1.66E-02	4.80E+01	9.61E+00	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.34E+04	6.15E+06	1.23E+06	No	2.56E+04	1.18E+07	2.35E+06	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.27E+05	1.05E+08	2.09E+07	No	6.48E+05	2.98E+08	5.97E+07	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-01	3.08E+02	6.18E+01	No	1.86E+00	5.73E+03	1.15E+03	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	3.19E-02	1.47E+01	2.93E+00	No	1.17E-01	5.39E+01	1.08E+01	No
97	Endosulfan (alpha)		YES	0	0	0.22	75.978	15.19559124	No	0	0	0.056	25.769	5.153857981	No	4.16E+01	1.20E+05	2.40E+04	No	5.19E+01	1.50E+05	3.00E+04	No
98	Endosulfan (beta)		YES	0	0	0.22	75.978	15.19559124	No	0	0	0.056	25.769	5.153857981	No	4.16E+01	1.20E+05	2.40E+04	No	5.19E+01	1.50E+05	3.00E+04	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.16E+01	1.20E+05	2.40E+04	No	5.19E+01	1.50E+05	3.00E+04	No
100	Endrin		YES	0	0	0.086	29.700	5.940094758	No	0	0	0.036	16.566	3.313194416	No	3.47E-02	1.00E+02	2.01E+01	No	3.53E-02	1.02E+02	2.04E+01	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.73E-01	5.01E+02	1.00E+02	No	1.76E-01	5.10E+02	1.02E+02	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	7.67E+01	3.53E+04	7.06E+03	No	8.12E+01	3.73E+04	7.47E+03	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	9.66E+02	4.44E+05	8.88E+04	No	3.11E+03	1.43E+06	2.86E+05	No
104	Heptachlor		YES	0	0	0.52	179.584	35.91685203	No	0	0	0.004	1.749	0.349726077	No	4.60E-05	1.33E-01	2.66E-02	No	4.63E-05	1.34E-01	2.68E-02	No
105	Heptachlor Epoxide		YES	0	0	0.52	179.584	35.91685203	No	0	0	0.004	1.749	0.349726077	No	2.28E-05	6.58E-02	1.32E-02	No	2.29E-05	6.62E-02	1.32E-02	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.67E-04	4.81E-01	9.63E-02	No	1.68E-04	4.85E-01	9.70E-02	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.31E-01	1.25E+03	2.49E+02	No	1.08E+01	3.11E+04	6.22E+03	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.88E-03	5.44E+00	1.09E+00	No	2.85E-03	8.24E+00	1.65E+00	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.59E-03	1.91E+01	3.81E+00	No	9.97E-03	2.88E+01	5.77E+00	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	328.087	65.61732582	No	0	0	-	-	-	-	7.12E-01	2.06E+03	4.12E+02	No	1.08E+00	3.11E+03	6.23E+02	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	3.94E+01	1.81E+04	3.63E+03	No	5.45E+02	2.97E+05	5.94E+04	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.09E+00	4.99E+02	9.99E+01	No	1.92E+00	8.83E+02	1.77E+02	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	9.56E+00	1.91E+00	No	1.07E-02	3.08E+01	6.16E+00	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	3.46E+01	1.59E+04	3.18E+03	No	5.61E+02	2.58E+05	5.16E+04	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.68E+01	7.72E+03	1.54E+03	No	4.04E+02	1.86E+05	3.72E+04	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.92E-03	1.42E+01	2.84E+00	No	2.95E-01	8.53E+02	1.71E+02	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.86E-04	1.98E+00	3.97E-01	No	1.76E+00	5.09E+03	1.02E+03	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.35E+00	6.79E+03	1.36E+03	No	3.50E+00	1.01E+04	2.02E+03	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288464495	No	3.73E-05	1.08E-01	2.16E-02	No	3.74E-05	1.08E-01	2.16E-02	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288464495	No	3.73E-05	1.08E-01	2.16E-02	No	3.74E-05	1.08E-01	2.16E-02	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288464495	No	3.73E-05	1.08E-01	2.16E-02	No	3.74E-05	1.08E-01	2.16E-02	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288464495	No	3.73E-05	1.08E-01	2.16E-02	No	3.74E-05	1.08E-01	2.16E-02	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288464495	No	3.73E-05	1.08E-01	2.16E-02	No	3.74E-05	1.08E-01	2.16E-02	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288464495	No	3.73E-05	1.08E-01	2.16E-02	No	3.74E-05	1.08E-01	2.16E-02	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	6.442	1.288464495	No	3.73E-05	1.08E-01	2.16E-02	No	3.74E-05	1.08E-01	2.16E-02	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	7.24E+02	3.33E+05	6.66E+04	No	2.33E+03	1.07E+06	2.15E+05	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	2.58E+01	1.19E+04	2.38E+03	No	4.09E+01	1.88E+04	3.77E+03	No

Facility Name: **Westrock Mill Company - Stevenson (DSN002)**

NPDES No.: **AL0022314**

6/13/2017

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	**Enter** Max Daily Discharge as reported by Applicant (C_d) Max	**Enter** Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Stream / Lake)
				µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	1.09	1.09	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	-
7	Copper**		Metals	0	0	0	0	4.93	4.93	0.388
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0	0	0.302
10	Nickel**		Metals	0	0	0	0	2.95	2.95	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	36.6	36.6	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	3.2	3.2	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**ChloroForm***	YES	VOC	0	0	0	0	58	58	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4.4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobromo-Methane***	YES	VOC	0	0	0	0	19.4	19.4	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichlorethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dintro-2-methylophenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	11.4	11.4	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzidine***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.007	Enter Q_d = wastewater discharge flow from facility (MGD)
0.0108306	Q_d = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	**Enter flow from upstream discharge** Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
5719	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
4289	**Enter or estimated, 1Q10**, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
35993	**Enter Mean Annual Flow**, Q_s = background stream flow in cfs above point of discharge
9442	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
$Q_d+Qd2+Q_s$	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

November 3, 2020

Facility Name: Westrock Mill Company - Stevenson (DSN002)

NPDES No.: AL0022314

Freshwater F&W classification.					Freshwater Acute ($\mu g/l$) Q_s =1Q10						Freshwater Chronic ($\mu g/l$) Q_s = 7Q10				Human Health Consumption Fish only ($\mu g/l$) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant (C_{max})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{daily})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{daily})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{daily})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.97E+08	3.94E+07	No
2	Arsenic		YES	0	1.09	592.334	234569493.815	46913898.763	No	0	1.09	291.324	137990010.844	27598002.169	No	3.03E-01	1.01E+06	2.01E+05	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	3379040.209	675808.042	No	0	0	1.042	550408.241	110081.648	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	1074434179.988	214886835.998	No	0	0	352.926	186359827.523	37271965.505	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	6336135.974	1267227.195	No	0	0	11.000	5808459.523	1161691.905	No	-	-	-	-
7	Copper			0	4.93	34.637	13716502.729	2743300.546	No	0	4.93	23.082	12186172.198	2437634.439	No	-	-	-	-
8	Lead			0	0	313.502	124149397.777	24829879.555	No	0	0	12.217	6450936.984	1290187.397	No	-	-	-	-
9	Mercury			0	0	2.400	950420.396	190084.079	No	0	0	0.012	6336.501	1267.300	No	4.24E-02	2.24E+04	4.48E+03	No
10	Nickel			0	2.95	927.209	367178907.991	73435781.598	No	0	2.95	102.983	54379456.171	10875891.234	No	9.93E+02	5.24E+08	1.05E+08	No
11	Selenium			0	0	20.000	7920169.868	1584033.994	No	0	0	5.000	2640208.874	528041.775	No	2.43E+03	1.28E+09	2.57E+08	No
12	Silver			0	0	3.217	1273663.213	254772.643	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.44E+05	2.89E+04	No
14	Zinc			0	36.6	365.092	140619562.672	28123912.534	No	0	36.6	357.957	189037331.992	37807466.398	No	1.49E+04	7.86E+09	1.57E+09	No
15	Cyanide			0	0	22.000	8712186.964	1742437.393	No	0	0	5.200	2745817.229	549163.446	No	9.33E+03	4.93E+09	9.86E+08	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	2.87E+06	5.73E+05	No
20	Aldrin		YES	0	0	3.000	1188025.495	237605.099	No	0	0	-	-	-	-	1.44E-01	4.79E+05	9.57E+04	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.94E-05	9.77E+01	1.95E+01	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	5.14E+07	1.03E+07	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.69E+01	2.62E+08	5.23E+07	No
24	Chlordane		YES	0	0	2.400	950420.396	190084.079	No	0	0	0.0043	2270.580	454.116	No	4.73E-04	1.57E+03	3.14E+02	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	4.78E+08	9.57E+07	No
26	Chlorodibromo-Methane		YES	0	3.2	-	-	-	-	0	3.2	-	-	-	-	7.41E+00	2.46E+07	4.92E+06	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	58	-	-	-	-	0	58	-	-	-	-	1.02E+02	3.39E+08	6.78E+07	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	6.03E+02	1.21E+02	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	4.25E+02	8.51E+01	No
32	4,4' - DDT		YES	0	0	1.100	435609.348	87121.870	No	0	0	0.001	528.042	105.608	No	1.28E-04	4.25E+02	8.51E+01	No
33	Dichlorobromo-Methane		YES	0	19.4	-	-	-	-	0	19.4	-	-	-	-	1.00E+01	3.34E+07	6.67E+06	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	7.10E+07	1.42E+07	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	3.12E+09	6.24E+08	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	1.38E+10	2.77E+09	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	6.49E+00	4.49E+08	8.97E+05	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	6.48E+08	1.30E+06	No
40	Dieldrin		YES	0	0	0.240	95042.040	19008.408	No	0	0	0.056	29570.339	5914.068	No	3.12E-05	1.04E+02	2.08E+01	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	6.57E+06	1.31E+06	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	4.60E+08	9.20E+07	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.48E+02	1.15E+09	2.30E+08	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	7.75E+06	1.55E+06	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	6.37E+06	1.27E+06	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	4.61E+09	9.21E+08	No
48	Toxaphene		YES	0	0	0.730	289086.204	57817.241	No	0	0	0.0002	105.608	21.122	No	1.62E-04	5.38E+02	1.08E+02	No
49	Tributyltin (TBT)		YES	0	0	0.460	182163.909	36432.782	No	0	0	0.072	38019.008	7603.802	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	3.02E+07	6.05E+06	No
52	Trichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	5.81E+07	1.16E+07	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	4.73E+06	9.47E+05	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	4.60E+07	9.19E+06	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	9.08E+07	1.82E+07	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.96E+02	2.63E+08	5.25E+07	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.64E+09	3.29E+08	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E+02	5.50E+08	1.10E+08	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	8.86E-02	1.77E-02	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	3454509.202	690901.840	No	0	0	6.693	3533963.765	706792.753	No	1.77E+00	5.87E+06	1.17E+06	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	2.64E+11	5.28E+10	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	4.70E+06	9.40E+05	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.78E+02	3.05E+08	6.11E+07	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	1.23E+10	2.46E+09	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	6.12E+01	1.22E+01	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.54E+04	7.08E+03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.54E+04	7.08E+03	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	5.63E+03	1.13E+03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	5.63E+03	1.13E+03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	1.02E+06	2.04E+05	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	2.00E+10	3.99E+09	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	11.4	-	-	-	-	0	11.4	-	-	-	-	1.28E+00	4.26E+06	8.52E+05	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	5.95E+08	1.19E+08	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	4.88E+08	9.76E+07	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.54E+04	7.08E+03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.82E+03	1.38E+09	2.77E+08	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.54E+04	7.08E+03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.56E+02	3.99E+08	7.98E+07	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	2.97E+08	5.94E+07	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	5.94E+07	1.19E+07	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	5.52E+04	1.10E+04	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.50E+04	1.35E+10	2.70E+09	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	3.42E+11	6.84E+10	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.99E+00	6.58E+06	1.32E+06	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	6.19E+04	1.24E+04	No
97	Endosulfan (alpha)		YES	0	0	0.22	87121.870	17424.374	No	0	0	0.056	29570.339	5914.068	No	5.19E+01	1.72E+08	3.45E+07	No
98	Endosulfan (beta)		YES	0	0	0.22	87121.870	17424.374	No	0	0	0.056	29570.339	5914.068	No	5.19E+01	1.72E+08	3.45E+07	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	1.72E+08	3.45E+07	No
100	Endrin		YES	0	0	0.086	34056.731	6811.346	No	0	0	0.036	19009.504	3801.901	No	3.53E-02	1.17E+05	2.34E+04	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E-01	5.86E+05	1.17E+05	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	4.29E+07	8.57E+06	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.64E+09	3.29E+08	No
104	Heptochlor		YES	0	0	0.52	205924.419	41184.884	No	0	0	0.0038	2006.559	401.312	No	4.63E-05	1.54E+02	3.08E+01	No
105	Heptachlor Epoxide		YES	0	0	0.52	205924.419	41184.884	No	0	0	0.0038	2006.559	401.312	No	2.29E-05	7.61E+01	1.52E+01	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	5.58E+02	1.12E+02	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	3.58E+07	7.15E+06	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	9.47E+03	1.89E+03	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	3.31E+04	6.63E+03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	376208.073	75241.615	No	0	0	-	-	-	-	1.08E+00	3.58E+06	7.16E+05	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	3.41E+08	6.81E+07	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	1.01E+06	2.03E+05	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.54E+04	7.08E+03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	2.96E+08	5.92E+07	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	2.13E+08	4.26E+07	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	9.80E+05	1.96E+05	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	5.85E+06	1.17E+06	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	1.16E+07	2.33E+06	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	7392.585	1478.517	No	3.74E-05	1.24E+02	2.49E+01	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	7392.585	1478.517	No	3.74E-05	1.24E+02	2.49E+01	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	7392.585	1478.517	No	3.74E-05	1.24E+02	2.49E+01	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	7392.585	1478.517	No	3.74E-05	1.24E+02	2.49E+01	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	7392.585	1478.517	No	3.74E-05	1.24E+02	2.49E+01	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	7392.585	1478.517	No	3.74E-05	1.24E+02	2.49E+01	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	7392.585	1478.517	No	3.74E-05	1.24E+02	2.49E+01	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	1.23E+09	2.46E+08	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.06E+01	2.16E+07	4.32E+06	No

Facility Name: Westrock Mill Company - Stevenson (DSN002)

NPDES No.: AL0022314

Freshwater PWS classification.					Max Daily Discharge as reported by Applicant (C_{max})	Freshwater Acute (µg/l) Q_s = 1Q10				Avg Daily Discharge as reported by Applicant (C_{av-d})	Freshwater Chronic (µg/l) Q_s = 7Q10				Human Health Consumption Fish & Water (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max		Water Quality Criteria (C_T)	Draft Permit Limit (C_{amax})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave		Water Quality Criteria (C_T)	Draft Permit Limit (C_{amav})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_T)	Draft Permit Limit (C_a)	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_T)	Draft Permit Limit (C_a)	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	5.52E+00	2.91E+06	5.83E+05	No	3.73E+02	1.97E+08	3.94E+07	No
2	Arsenic		YES	0	1.09	592.334	234566493.815	46913898.76	No	0	1.09	261.324	137990010.844	27598002.17	No	1.20E-01	4.00E+05	8.01E+04	No	3.03E-01	1.01E+06	2.01E+05	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	3379040.209	675808.0418	No	0	0	1.042	550408.241	110081.6481	No	-	-	-	-	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	1074434179.988	214886836	No	0	0	352.926	186359827.523	37271965.5	No	-	-	-	-	-	-	-	-
6	Chromium/ Chromium VI			0	16.000	16.000	6336135.974	1267227.195	No	0	0	11.000	5808459.523	1161691.905	No	-	-	-	-	-	-	-	-
7	Copper			0	4.83	34.637	13716502.729	2743300.546	No	0	4.83	23.082	12188172.196	2437634.439	No	1.30E+03	6.86E+08	1.37E+08	No	-	-	-	-
8	Lead			0	0	313.502	124149397.777	24829879.56	No	0	0	12.217	6450936.984	1290187.397	No	-	-	-	-	-	-	-	-
9	Mercury			0	0	2.400	950420.396	190084.0792	No	0	0	0.012	6336.501	1267.30026	No	4.19E-02	2.21E+04	4.43E+03	No	4.24E-02	2.24E+04	4.48E+03	No
10	Nickel			0	2.95	927.200	367178907.991	73435781.6	No	0	2.95	102.963	54379456.171	10875891.23	No	4.11E+02	2.17E+08	4.34E+07	No	9.93E+02	5.24E+08	1.05E+08	No
11	Selenium			0	0	20.000	7920169.968	1584033.994	No	0	0	5.000	2640208.874	528041.7748	No	1.63E+02	8.62E+07	1.72E+07	No	2.43E+03	1.28E+09	2.57E+08	No
12	Silver			0	0	3.217	1273863.213	254772.6425	No	0	0	-	-	-	-	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	1.74E-01	9.17E+04	1.83E+04	No	2.74E-01	1.44E+05	2.89E+04	No
14	Zinc			0	36.6	355.092	140619562.672	28123912.53	No	0	36.6	357.997	188937331.992	37807466.4	No	6.16E+03	3.25E+09	6.50E+08	No	1.49E+04	7.86E+09	1.57E+09	No
15	Cyanide			0	0	22.000	8712186.964	1742437.393	No	0	0	5.200	2745817.229	549163.4458	No	1.38E+02	7.28E+07	1.46E+07	No	9.33E+03	4.93E+09	9.86E+08	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	4.14E+00	2.19E+06	4.37E+05	No	5.43E+00	2.87E+06	5.73E+05	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.47E-02	1.48E+05	2.97E+04	No	1.44E-01	4.79E+05	9.57E+04	No
20	Aldrin		YES	0	0	3.000	1188025.495	237605.099	No	0	0	-	-	-	-	2.90E-05	9.63E+01	1.93E+01	No	2.94E-05	9.77E+01	1.95E+01	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.12E+00	3.72E+06	7.44E+05	No	1.55E+01	5.14E+07	1.03E+07	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.19E+00	1.39E+07	2.79E+06	No	7.88E+01	2.62E+08	5.23E+07	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.10E-01	6.98E+05	1.40E+05	No	9.57E-01	3.18E+06	6.36E+05	No
24	Chlordane		YES	0	0	2.400	950420.396	190084.0792	No	0	0	0.0043	2270.580	454.1158264	No	4.71E-04	1.56E+03	3.13E+02	No	4.73E-04	1.57E+03	3.14E+02	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.21E+02	6.40E+07	1.28E+07	No	9.06E+02	4.78E+08	9.57E+07	No
26	Chlorodibromo-Methane		YES	0	3.2	-	-	-	-	0	3.2	-	-	-	-	3.94E-01	1.31E+06	2.62E+05	No	7.41E+00	2.46E+07	4.92E+06	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	56	-	-	-	-	0	56	-	-	-	-	5.43E+00	1.81E+07	3.61E+06	No	1.02E+02	3.39E+08	6.78E+07	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	6.02E+02	1.20E+02	No	1.81E-04	6.03E+02	1.21E+02	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	4.25E+02	8.50E+01	No	1.28E-04	4.25E+02	8.51E+01	No
32	4,4' - DDT		YES	0	0	1.100	435609.348	87121.86964	No	0	0	0.001	528.042	105.608355	No	1.28E-04	4.25E+02	8.50E+01	No	1.28E-04	4.25E+02	8.51E+01	No
33	Dichlorobromo-Methane		YES	0	19.4	-	-	-	-	0	19.4	-	-	-	-	5.34E-01	1.78E+06	3.55E+05	No	1.00E+01	3.34E+07	6.67E+06	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.78E-01	1.26E+06	2.51E+05	No	2.14E+01	7.10E+07	1.42E+07	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	1.37E+01	7.22E+06	1.44E+06	No	5.91E+03	3.12E+09	6.24E+08	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.23E+02	1.07E+09	2.15E+08	No	4.17E+03	1.38E+10	2.77E+09	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	4.92E-01	2.60E+05	5.20E+04	No	8.49E+00	4.49E+06	8.97E+05	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	3.40E-01	1.80E+05	3.59E+04	No	1.23E+01	6.48E+06	1.30E+06	No
40	Dieldrin		YES	0	0	0.240	95042.040	19008.40792	No	0	0	0.056	29570.339	5914.067878	No	3.08E-05	1.02E+02	2.05E+01	No	3.12E-05	1.04E+02	2.08E+01	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.48E+02	2.37E+08	4.73E+07	No	1.24E+03	6.57E+08	1.31E+08	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	4.64E+01	2.45E+07	4.90E+06	No	8.71E+02	4.60E+08	9.20E+07	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.60E+00	1.53E+07	3.06E+06	No	3.46E+02	1.15E+09	2.30E+08	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.63E-01	5.41E+05	1.08E+05	No	2.33E+00	7.75E+06	1.55E+06	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.03E-01	2.00E+06	4.01E+05	No	1.92E+00	6.37E+06	1.27E+06	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	1.21E+03	6.37E+08	1.27E+08	No	8.72E+03	4.61E+09	9.21E+08	No
48	Toxaphene		YES	0	0	0.730	289086.204	57817.24076	No	0	0	0.0002	105.608	21.12167099	No	1.61E-04	5.35E+02	1.07E+02	No	1.62E-04	5.38E+02	1.08E+02	No
49	Tributyltin (TBT)		YES	0	0	0.460	182163.909	36432.78185	No	0	0	0.072	38019.008	7603.801558	No	-	-	-	-	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.75E-01	1.91E+06	3.82E+05	No	9.10E+00	3.02E+07	6.05E+06	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.40E+00	7.96E+06	1.59E+06	No	1.75E+01	5.81E+07	1.16E+07	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.46E-02	8.16E+04	1.63E+04	No	1.42E+00	4.73E+06	9.47E+05	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	5.81E+01	3.07E+07	6.14E+06	No	8.71E+01	4.60E+07	9.19E+06	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	6.52E+01	3.44E+07	6.89E+06	No	1.72E+02	9.08E+07	1.82E+07	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	2.91E+02	1.54E+08	3.07E+07	No	4.96E+02	2.63E+08	5.25E+07	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	6.85E+01	3.61E+07	7.23E+06	No	3.11E+03	1.64E+09	3.29E+08	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.26E+01	4.19E+07	8.38E+06	No	1.65E+02	5.50E+08	1.10E+08	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.63E-08	8.75E-02	1.75E-02	No	2.67E-08	8.86E-02	1.77E-02	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	3454509.202	690901.8403	No	0	0	8.693	3533963.765	706792.753	No	2.50E-01	8.32E+05	1.66E+05	No	1.77E+00	5.87E+06	1.17E+06	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	1.03E+04	5.43E+09	1.09E+09	No	5.00E+05	2.64E+11	5.28E+10	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.79E-01	3.25E+06	6.51E+05	No	1.41E+00	4.70E+06	9.40E+05	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	4.54E+02	2.40E+08	4.79E+07	No	5.79E+02	3.05E+08	6.11E+07	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	7.24E+03	3.82E+09	7.65E+08	No	2.33E+04	1.23E+10	2.46E+09	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	5.56E-05	3.47E+01	6.95E+00	No	1.16E-04	6.12E+01	1.22E+01	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.10E+04	2.20E+03	No	1.07E-02	3.54E+04	7.08E+03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.10E+04	2.20E+03	No	1.07E-02	3.54E+04	7.08E+03	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.75E+03	3.49E+02	No	1.07E-02	5.63E+03	1.13E+03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.75E+03	3.49E+02	No	1.07E-02	5.63E+03	1.13E+03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.68E-02	9.58E+04	1.92E+04	No	3.07E-01	1.02E+06	2.04E+05	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	1.35E+03	7.13E+08	1.43E+08	No	3.78E+04	2.00E+10	3.99E+09	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	11.4	-	-	-	-	0	11.4	6.47E-01	2.82E+06	5.63E+05	No	1.28E+00	4.26E+06	8.52E+05	No	-	-	-	-
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	9.71E+02	5.13E+08	1.03E+08	No	1.13E+03	5.95E+08	1.19E+08	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	6.95E+02	3.67E+08	7.34E+07	No	9.24E+02	4.88E+08	9.76E+07	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.10E+04	2.20E+03	No	1.07E-02	3.54E+04	7.08E+03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.50E+03	7.91E+08	1.58E+08	No	2.62E+03	1.38E+09	2.77E+08	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.10E+04	2.20E+03	No	1.07E-02	3.54E+04	7.08E+03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	3.44E+02	1.81E+08	3.63E+07	No	7.55E+02	3.99E+08	7.98E+07	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+02	1.35E+08	2.70E+07	No	5.62E+02	2.97E+08	5.94E+07	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.11E+01	2.70E+07	5.40E+06	No	1.12E+02	5.94E+07	1.19E+07	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.37E-02	4.55E+04	9.10E+03	No	1.68E-02	5.52E+04	1.10E+04	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.34E+04	7.08E+09	1.41E+09	No	2.56E+04	1.35E+10	2.70E+09	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.27E+05	1.20E+11	2.40E+10	No	6.48E+05	3.42E+11	6.84E+10	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-01	3.55E+05	7.10E+04	No	1.98E+00	6.58E+06	1.32E+06	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	3.19E-02	1.68E+04	3.35E+03	No	1.17E-01	6.19E+04	1.24E+04	No
97	Endosulfan (alpha)		YES	0	0	0.22	87121.870	17424.37393	No	0	0	0.056	29570.338	5914.067878	No	4.16E+01	1.38E+08	2.76E+07	No	5.19E+01	1.72E+08	3.45E+07	No
98	Endosulfan (beta)		YES	0	0	0.22	87121.870	17424.37393	No	0	0	0.056	29570.339	5914.067878	No	4.16E+01	1.38E+08	2.76E+07	No	5.19E+01	1.72E+08	3.45E+07	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.16E+01	1.38E+08	2.76E+07	No	5.19E+01	1.72E+08	3.45E+07	No
100	Endrin		YES	0	0	0.086	34056.731	6811.346172	No	0	0	0.036	19009.504	3801.900779	No	3.47E-02	1.15E+05	2.31E+04	No	3.53E-02	1.17E+05	2.34E+04	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.73E-01	5.76E+05	1.15E+05	No	1.76E-01	5.86E+05	1.17E+05	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	7.67E+01	4.05E+07	8.10E+06	No	8.12E+01	4.29E+07	8.57E+06	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	9.66E+02	5.10E+08	1.02E+08	No	3.11E+03	1.64E+09	3.29E+08	No
104	Heptochlor		YES	0	0	0.52	205924.419	41184.88363	No	0	0	0.004	2006.559	401.3117489	No	4.60E-05	1.53E+02	3.06E-01	No	4.83E-05	1.54E+02	3.08E+01	No
105	Heptachlor Epoxide		YES	0	0	0.52	205924.419	41184.88363	No	0	0	0.004	2006.559	401.3117489	No	2.28E-05	7.56E+01	1.51E+01	No	2.29E-05	7.61E+01	1.52E+01	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.67E-04	5.53E+02	1.11E+02	No	1.68E-04	5.56E+02	1.12E+02	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.31E-01	1.43E+06	2.86E+05	No	1.08E+01	3.58E+07	7.15E+06	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.88E-03	6.26E+03	1.25E+03	No	2.85E-03	9.47E+03	1.89E+03	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.59E-03	2.19E+04	4.38E+03	No	9.97E-03	3.31E+04	6.63E+03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	376208.073	75241.61469	No	0	0	-	-	-	-	7.12E-01	2.37E+06	4.73E+05	No	1.08E+00	3.58E+06	7.16E+05	No
111	HexachlorocyclePentadiene			0	0	-	-	-	-	0	0	-	-	-	-	3.94E+01	2.05E+07	4.15E+06	No	6.45E+02	3.41E+08	6.81E+07	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.09E+00	5.73E+05	1.15E+05	No	1.92E+00	1.01E+06	2.03E+05	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	1.10E+04	2.20E+03	No	1.07E-02	3.54E+04	7.08E+03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	3.46E+01	1.83E+07	3.65E+06	No	5.61E+02	2.96E+08	5.92E+07	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.68E+01	8.86E+06	1.77E+06	No	4.04E+02	2.13E+08	4.26E+07	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.92E-03	1.63E+04	3.27E+03	No	2.95E-01	9.80E+05	1.96E+05	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.86E-04	2.28E+03	4.56E+02	No	1.76E+00	5.85E+06	1.17E+06	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.35E+00	7.81E+06	1.56E+06	No	3.50E+00	1.16E+07	2.33E+06	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	7382.585	1478.51697	No	3.73E-05	1.24E+02	2.48E+01	No	3.74E-05	1.24E+02	2.49E+01	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	7382.585	1478.51697	No	3.73E-05	1.24E+02	2.48E+01	No	3.74E-05	1.24E+02	2.49E+01	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	7382.585	1478.51697	No	3.73E-05	1.24E+02	2.48E+01	No	3.74E-05	1.24E+02	2.49E+01	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	7382.585	1478.51697	No	3.73E-05	1.24E+02	2.48E+01	No	3.74E-05	1.24E+02	2.49E+01	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	7382.585	1478.51697	No	3.73E-05	1.24E+02	2.48E+01	No	3.74E-05	1.24E+02	2.49E+01	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	7382.585	1478.51697	No	3.73E-05	1.24E+02	2.48E+01	No	3.74E-05	1.24E+02	2.49E+01	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	7382.585	1478.51697	No	3.73E-05	1.24E+02	2.48E+01	No	3.74E-05	1.24E+02	2.49E+01	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	7.24E+02	3.82E+08	7.65E+07	No	2.33E+03	1.23E+09	2.46E+08	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	2.58E+01	1.36E+07	2.73E+06	No	4.09E+01	2.16E+07	4.32E+06	No

Facility Name: **Westrock Mill Company - Stevenson (DSN005)**

NPDES No.: **AL0022314**

6/13/2017

$$Q_d*C_d + Q_{d2}*C_{d2} + Q_s*C_s = Q_r*C_r$$

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	Enter Max Daily Discharge as reported by Applicant (C_d) Max	Enter Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Stream / Lake)
				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*,****	YES	Metals	0	0	0	0	1.77	1.352	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	1.16	0.83	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	4.29	3.55	0.388
8	Lead**		Metals	0	0	0	0	4.26	2.38	0.206
9	Mercury**		Metals	0	0	0	0	0	0	0.302
10	Nickel**		Metals	0	0	0	0	2.67	2.43	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	0	0	0.330
15	Cyanide		Metals	0	0	0	0	0.18	0.18	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**ChloroForm***	YES	VOC	0	0	0	0	0	0	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4,4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobromo-Methane***	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltine (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichlorethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6-Dintro-2-methylophenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzidine***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.02	Enter Q_d = wastewater discharge flow from facility (MGD)
0.03094458	Q_s = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	**Enter flow from upstream discharge** Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
0	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
0	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0.4	**Enter Mean Annual Flow**, Q_s = background stream flow in cfs above point of discharge
0	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_s +Qd2+Q_d	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

November 3, 2020

Facility Name: Westrock Mill Company - Stevenson (DSN005)

NPDES No.: AL0022314

						Freshwater F&W classification					Freshwater Acute (µg/l) Q_s =1Q10					Freshwater Chronic (µg/l) Q_s = 7Q10					Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant ($C_{e(max)}$)	Water Quality Criteria (C_s)	Draft Permit Limit ($C_{a(max)}$)	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant ($C_{e(avg)}$)	Water Quality Criteria (C_s)	Draft Permit Limit ($C_{a(avg)}$)	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_s)	Draft Permit Limit ($C_{a(avg)}$)	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	3.73E+02	7.47E+01	No
2	Arsenic	YES	YES	0	1.77	592.334	592.334	118.467	No	0	1.352	261.324	261.324	52.265	No	3.03E-01	4.22E+00	8.44E-01	Yes
3	Berylium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	8.533	1.707	No	0	0	1.042	1.042	0.208	No	-	-	-	-
5	Chromium/ Chromium III			0	1.16	2713.159	2713.159	542.632	No	0	0.83	352.926	352.926	70.585	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	16.000	3.200	No	0	0	11.000	11.000	2.200	No	-	-	-	-
7	Copper			0	4.29	34.637	34.637	6.927	No	0	3.55	23.082	23.082	4.616	No	-	-	-	-
8	Lead			0	4.26	313.502	313.502	62.700	No	0	2.38	12.217	12.217	2.443	No	-	-	-	-
9	Mercury			0	0	2.400	2.400	0.480	No	0	0	0.012	0.012	0.002	No	4.24E-02	4.24E-02	8.48E-03	No
10	Nickel			0	2.67	927.200	927.200	185.440	No	0	2.43	102.983	102.983	20.597	No	9.93E+02	9.93E+02	1.99E+02	No
11	Selenium			0	0	20.000	20.000	4.000	No	0	0	5.000	5.000	1.000	No	2.43E+03	2.43E+03	4.86E+02	No
12	Silver			0	0	3.217	3.217	0.643	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	2.74E-01	5.47E-02	No
14	Zinc			0	0	355.092	355.092	71.018	No	0	0	357.997	357.997	71.599	No	1.49E+04	1.49E+04	2.98E+03	No
15	Cyanide			0	0.18	22.000	22.000	4.400	No	0	0.18	5.200	5.200	1.040	No	9.33E+03	9.33E+03	1.87E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	5.43E+00	1.09E+00	No
20	Aldrin		YES	0	0	3.000	3.000	0.600	No	0	0	-	-	-	-	1.44E-03	2.01E+00	4.01E-01	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.94E-05	4.09E-04	8.19E-05	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.56E+01	2.15E+02	4.31E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.68E+01	1.10E+03	2.19E+02	No
24	Chlordane		YES	0	0	2.400	2.400	0.480	No	0	0	0.0043	0.004	0.001	No	9.57E-01	1.33E+01	2.67E+00	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.73E-04	6.58E-03	1.32E-03	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	9.06E+02	1.81E+02	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	1.03E+02	2.06E+01	No
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+02	1.42E+03	2.84E+02	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	2.53E-03	5.05E-04	No
32	4,4' - DDT		YES	0	0	1.100	1.100	0.220	No	0	0	0.001	0.001	0.000	No	1.28E-04	1.78E-03	3.57E-04	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.78E-03	3.57E-04	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	1.40E+02	2.80E+01	No
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	2.98E+02	5.95E+01	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	5.91E+03	1.18E+03	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	5.60E+04	1.16E+04	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	8.49E+00	1.70E+00	No
40	Dieldrin		YES	0	0	0.240	0.240	0.048	No	0	0	0.056	0.056	0.011	No	1.23E+01	1.23E+01	2.46E+00	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	3.12E-05	4.35E-04	8.70E-05	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	1.24E+03	2.49E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	8.71E+02	1.74E+02	No
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.48E+02	4.81E+03	9.63E+02	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	3.25E+01	6.50E+00	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	2.67E+01	5.34E+00	No
48	Toxaphene		YES	0	0	0.730	0.730	0.146	No	0	0	0.0002	0.000	0.000	No	8.72E+03	8.72E+03	1.74E+03	No
49	Tributyltin (TBT)		YES	0	0	0.460	0.460	0.092	No	0	0	0.072	0.072	0.014	No	1.62E-04	2.26E-03	4.51E-04	No
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	1.27E+02	2.53E+01	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	2.43E+02	4.87E+01	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	1.98E+01	3.97E+00	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	8.71E+01	1.74E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	1.72E+02	3.44E+01	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	4.98E+02	9.95E+01	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.11E+03	6.22E+02	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	2.30E+03	4.61E+02	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	3.71E-07	7.43E-08	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	8.723	1.745	No	0	0	6.693	6.693	1.339	No	1.77E+00	2.46E+01	4.92E+00	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	5.00E+05	1.00E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	1.97E+01	3.94E+00	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	5.79E+02	1.16E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	2.33E+04	4.67E+03	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	1.16E-04	2.32E-05	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.48E-01	2.97E-02	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.48E-01	2.97E-02	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.07E-02	2.13E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.07E-02	2.13E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	4.28E+00	8.56E-01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	3.78E+04	7.56E+03	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	1.79E+01	3.57E+00	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	1.13E+03	2.25E+02	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	9.24E+02	1.85E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.48E-01	2.97E-02	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	2.62E+03	5.24E+02	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.48E-01	2.97E-02	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.65E+02	7.55E+02	1.51E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	5.62E+02	1.12E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	1.12E+02	2.25E+01	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	2.31E-01	4.63E-02	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	2.56E+04	5.11E+03	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	6.48E+05	1.30E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.69E+00	2.76E+01	5.52E+00	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	1.17E-01	2.34E-02	No
97	Endosulfan (alpha)		YES	0	0	0.22	0.220	0.044	No	0	0	0.056	0.056	0.011	No	5.19E+01	7.22E+02	1.44E+02	No
98	Endosulfan (beta)		YES	0	0	0.22	0.220	0.044	No	0	0	0.056	0.056	0.011	No	5.19E+01	7.22E+02	1.44E+02	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	7.22E+02	1.44E+02	No
100	Endrin		YES	0	0	0.086	0.086	0.017	No	0	0	0.036	0.036	0.007	No	3.53E-02	4.91E-01	9.82E-02	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E-01	2.48E+00	4.91E-01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	8.12E+01	1.62E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.11E+03	6.22E+02	No
104	Heptochlor		YES	0	0	0.52	0.520	0.104	No	0	0	0.0038	0.004	0.001	No	4.63E-05	6.45E-04	1.29E-04	No
105	Heptachlor Epoxide		YES	0	0	0.52	0.520	0.104	No	0	0	0.0038	0.004	0.001	No	2.29E-05	3.19E-04	6.38E-05	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-04	2.34E-03	4.67E-04	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	1.50E+02	3.00E+01	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	3.97E-02	7.94E-03	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	1.39E-01	2.78E-02	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	0.950	0.190	No	0	0	-	-	-	-	1.08E+00	1.50E+01	3.00E+00	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	6.45E+02	1.29E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	1.92E+00	3.84E-01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.48E-01	2.97E-02	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	5.61E+02	1.12E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	4.04E+02	8.07E+01	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	4.11E+00	8.22E-01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	2.45E+01	4.90E+00	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	4.88E+01	9.75E+00	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	5.21E-04	1.04E-04	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	5.21E-04	1.04E-04	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	5.21E-04	1.04E-04	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	5.21E-04	1.04E-04	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	5.21E-04	1.04E-04	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	5.21E-04	1.04E-04	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	5.21E-04	1.04E-04	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	2.33E+03	4.67E+02	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	4.09E+01	8.19E+00	No

Facility Name: Westrock Mill Company - Stevenson (DSN005)

NPDES No.: AL0022314

															Human Health Consumption Fish & Water (µg/l)				Human Health Consumption Fish only (µg/l)			
Freshwater PWS classification.															Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10				Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant (C_{daily})	Freshwater Acute (µg/l) Q_s =1Q10 Water Quality Criteria (C_f)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{daily})	Freshwater Chronic (µg/l) Q_s = 7Q10 Water Quality Criteria (C_f)	Draft Permit Limit (C_{mon})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_f)	Draft Permit Limit (C_a)	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_f)	Draft Permit Limit (C_a)	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	5.52E+00	5.52E+00	1.10E+00	No	3.73E+02	3.73E+02	7.47E+01	No
2	Arsenic	YES	YES	0	1.77	592.334	592.334	118.466899	No	0	1.352	261.324	261.324	52.26480836	No	1.20E-01	1.68E+00	3.36E-01	Yes	3.03E-01	4.22E+00	8.44E-01	Yes
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	8.533	1.706549341	No	0	0	1.042	1.042	0.208471476	No	-	-	-	-	-	-	-	-
5	Chromium/ Chromium III			0	1.18	2713.159	2713.159	542.6316801	No	0	0.83	352.926	352.926	70.58525912	No	-	-	-	-	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	16.000	3.2	No	0	0	11.000	11.000	2.2	No	-	-	-	-	-	-	-	-
7	Copper			0	4.29	34.637	34.637	6.927377905	No	0	3.55	23.082	23.082	4.616366865	No	1.30E+03	1.30E+03	2.60E+02	No	-	-	-	-
8	Lead			0	4.28	313.502	313.502	62.70037046	No	0	2.38	12.217	12.217	2.443343422	No	-	-	-	-	-	-	-	-
9	Mercury			0	0	2.400	2.400	0.48	No	0	0	0.012	0.012	0.0024	No	4.19E-02	4.19E-02	8.38E-03	No	4.24E-02	4.24E-02	8.48E-03	No
10	Nickel			0	2.67	927.200	927.200	185.4399133	No	0	2.43	102.983	102.983	20.59664927	No	4.11E+02	4.11E+02	8.21E+01	No	9.93E+02	9.93E+02	1.99E+02	No
11	Selenium			0	0	20.000	20.000	4	No	0	0	5.000	5.000	1	No	1.63E+02	1.63E+02	3.26E+01	No	2.43E+03	2.43E+03	4.86E+02	No
12	Silver			0	0	3.217	3.217	0.643351452	No	0	0	-	-	-	-	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	1.74E-01	1.74E-01	3.47E-02	No	2.74E-01	2.74E-01	5.47E-02	No
14	Zinc			0	0	355.092	355.092	71.01845705	No	0	0	357.997	357.997	71.59938513	No	6.16E+03	6.16E+03	1.23E+03	No	1.49E+04	1.49E+04	2.98E+03	No
15	Cyanide			0	0.18	22.000	22.000	4.4	No	0	0.18	5.200	5.200	1.04	No	1.36E+02	1.36E+02	2.76E+01	No	9.33E+03	9.33E+03	1.87E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	4.14E+00	4.14E+00	8.28E-01	No	5.43E+00	5.43E+00	1.09E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.47E-02	6.23E-01	1.25E-01	No	1.44E-01	2.01E+00	4.01E-01	No
20	Aldrin		YES	0	0	3.000	3.000	0.6	No	0	0	-	-	-	-	2.90E-05	4.04E-04	8.07E-05	No	2.94E-05	4.09E-04	8.19E-05	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.12E+00	1.56E+01	3.12E+00	No	1.55E+01	2.15E+02	4.31E+01	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.19E+00	5.84E+01	1.17E+01	No	7.86E+01	1.10E+03	2.19E+02	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.10E-01	2.93E+00	5.85E-01	No	9.57E-01	1.33E+01	2.67E+00	No
24	Chlordane		YES	0	0	2.400	2.400	0.48	No	0	0	0.0043	0.004	0.00086	No	4.71E-04	6.55E-03	1.31E-03	No	4.73E-04	6.56E-03	1.32E-03	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.21E+02	1.21E+02	2.43E+01	No	9.06E+02	9.06E+02	1.81E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.94E-01	5.49E+00	1.10E+00	No	7.41E+00	1.03E+02	2.06E+01	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	7.58E+01	1.51E+01	No	1.02E+02	1.42E+03	2.84E+02	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	2.52E-03	5.05E-04	No	1.81E-04	2.53E-03	5.05E-04	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.78E-03	3.56E-04	No	1.28E-04	1.78E-03	3.57E-04	No
32	4,4' - DDT		YES	0	0	1.100	1.100	0.22	No	0	0	0.001	0.001	0.0002	No	1.28E-04	1.78E-03	3.56E-04	No	1.28E-04	1.78E-03	3.57E-04	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.34E-01	7.44E+00	1.49E+00	No	1.00E+01	1.40E+02	2.80E+01	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.78E-01	5.26E+00	1.05E+00	No	2.14E+01	2.98E+02	5.95E+01	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	1.37E+01	1.37E+01	2.74E+00	No	5.91E+03	5.91E+03	1.18E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.23E+02	4.50E+03	8.99E+02	No	4.17E+03	5.80E+04	1.16E+04	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	4.92E-01	4.92E-01	9.84E-02	No	8.49E+00	8.49E+00	1.70E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	3.40E-01	3.40E-01	6.81E-02	No	1.23E+01	1.23E+01	2.46E+00	No
40	Dieldrin		YES	0	0	0.240	0.240	0.048	No	0	0	0.056	0.056	0.0112	No	3.08E-05	4.29E-04	8.58E-05	No	3.12E-05	4.35E-04	8.70E-05	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.48E+02	4.48E+02	8.96E+01	No	1.24E+03	1.24E+03	2.49E+02	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	4.64E+01	4.64E+01	9.28E+00	No	5.71E+02	5.71E+02	1.74E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.60E+00	6.41E+01	1.28E+01	No	3.46E+02	4.81E+03	9.63E+02	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.63E-01	2.27E+00	4.53E-01	No	2.33E+00	3.25E+01	6.50E+00	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	8.03E-01	8.40E+00	1.68E+00	No	1.92E+00	2.67E+01	5.34E+00	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	1.21E+03	1.21E+03	2.41E+02	No	8.72E+03	8.72E+03	1.74E+03	No
48	Toxaphene		YES	0	0	0.730	0.730	0.146	No	0	0	0.0002	0.000	0.00004	No	1.61E-04	2.24E-03	4.49E-04	No	1.62E-04	2.26E-03	4.51E-04	No
49	Tributyltin (TBT)		YES	0	0	0.460	0.460	0.092	No	0	0	0.072	0.072	0.0144	No	-	-	-	-	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.75E-01	8.01E+00	1.60E+00	No	9.10E+00	1.27E+02	2.53E+01	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.40E+00	3.34E+01	6.68E+00	No	1.75E+01	2.43E+02	4.87E+01	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.46E-02	3.42E-01	6.84E-02	No	1.42E+00	1.98E+01	3.97E+00	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	5.81E+01	5.81E+01	1.16E+01	No	8.71E+01	8.71E+01	1.74E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	6.52E+01	6.52E+01	1.30E+01	No	1.72E+02	1.72E+02	3.44E+01	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	2.91E+02	2.91E+02	5.82E+01	No	4.98E+02	4.98E+02	9.95E+01	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	6.85E+01	6.85E+01	1.37E+01	No	3.11E+03	3.11E+03	6.22E+02	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.26E+01	1.76E+02	3.51E+01	No	1.65E+02	2.30E+03	4.61E+02	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.63E-06	3.66E-07	7.33E-08	No	2.67E-06	3.71E-07	7.43E-08	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	8.723	1.744664176	No	0	0	6.693	6.693	1.338516736	No	2.50E-01	3.49E+00	6.97E-01	No	1.77E+00	2.46E+01	4.92E+00	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	1.03E+04	1.03E+04	2.06E+03	No	5.00E+05	5.00E+05	1.00E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.79E-01	1.36E+01	2.73E+00	No	1.41E+00	1.97E+01	3.94E+00	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	4.54E+02	4.54E+02	9.07E+01	No	5.79E+02	5.79E+02	1.16E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	7.24E+03	7.24E+03	1.45E+03	No	2.33E+04	2.33E+04	4.67E+03	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	6.58E-05	6.58E-05	1.32E-05	No	1.16E-04	1.16E-04	2.32E-05	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	4.60E-02	9.21E-03	No	1.07E-02	1.48E-01	2.97E-02	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	4.60E-02	9.21E-03	No	1.07E-02	1.48E-01	2.97E-02	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	3.31E-03	6.61E-04	No	1.07E-02	1.07E-02	2.13E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	3.31E-03	6.61E-04	No	1.07E-02	1.07E-02	2.13E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.88E-02	4.02E-01	8.03E-02	No	3.07E-01	4.28E+00	8.56E-01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	1.35E+03	1.35E+03	2.70E+02	No	3.78E+04	3.78E+04	7.56E+03	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	8.47E-01	1.18E+01	2.36E+00	No	1.28E+00	1.79E+01	3.57E+00	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	9.71E+02	9.71E+02	1.94E+02	No	1.13E+03	1.13E+03	2.25E+02	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	6.95E+02	6.95E+02	1.39E+02	No	9.24E+02	9.24E+02	1.85E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	4.60E-02	9.21E-03	No	1.07E-02	1.48E-01	2.97E-02	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.50E+03	1.50E+03	3.00E+02	No	2.62E+03	2.62E+03	5.24E+02	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	4.60E-02	9.21E-03	No	1.07E-02	1.48E-01	2.97E-02	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	3.44E+02	3.44E+02	6.87E+01	No	7.55E+02	7.55E+02	1.51E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+02	2.56E+02	5.11E+01	No	5.62E+02	5.62E+02	1.12E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.11E+01	5.11E+01	1.02E+01	No	1.12E+02	1.12E+02	2.25E+01	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.37E-02	1.81E-01	3.81E-02	No	1.66E-02	2.31E-01	4.63E-02	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.34E+04	1.34E+04	2.67E+03	No	2.56E+04	2.56E+04	5.11E+03	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.27E+05	2.27E+05	4.55E+04	No	6.48E+05	6.48E+05	1.30E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-01	1.49E+00	2.98E-01	No	1.98E+00	2.76E+01	5.52E+00	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	3.19E-02	3.19E-02	6.37E-03	No	1.17E-01	1.17E-01	2.34E-02	No
97	Endosulfan (alpha)		YES	0	0	0.22	0.220	0.044	No	0	0	0.056	0.056	0.0112	No	4.16E+01	5.79E+02	1.16E+02	No	5.19E+01	7.22E+02	1.44E+02	No
98	Endosulfan (beta)		YES	0	0	0.22	0.220	0.044	No	0	0	0.056	0.056	0.0112	No	4.16E+01	5.79E+02	1.16E+02	No	5.19E+01	7.22E+02	1.44E+02	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.16E+01	5.79E+02	1.16E+02	No	5.19E+01	7.22E+02	1.44E+02	No
100	Endrin		YES	0	0	0.086	0.086	0.0172	No	0	0	0.036	0.036	0.0072	No	3.47E-02	4.83E-01	9.66E-02	No	3.53E-02	4.91E-01	9.82E-02	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.73E-01	2.41E+00	4.83E-01	No	1.76E-01	2.46E+00	4.91E-01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	7.57E+01	7.67E+01	1.53E+01	No	8.12E+01	8.12E+01	1.62E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	9.66E+02	9.66E+02	1.93E+02	No	3.11E+03	3.11E+03	6.22E+02	No
104	Heptochlor		YES	0	0	0.52	0.520	0.104	No	0	0	0.004	0.004	0.00076	No	4.60E-05	6.41E-04	1.28E-04	No	4.63E-05	6.45E-04	1.29E-04	No
105	Heptachlor Epoxide		YES	0	0	0.52	0.520	0.104	No	0	0	0.004	0.004	0.00076	No	2.28E-05	3.17E-04	6.34E-05	No	2.29E-05	3.19E-04	6.38E-05	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.67E-04	2.32E-03	4.64E-04	No	1.68E-04	2.34E-03	4.67E-04	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.31E-01	6.00E+00	1.20E+00	No	1.08E+01	1.50E+02	3.00E+01	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.88E-03	2.62E-02	5.25E-03	No	2.85E-03	3.97E-02	7.94E-03	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.59E-03	9.18E-02	1.84E-02	No	9.97E-03	1.39E-01	2.78E-02	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	0.950	0.19	No	0	0	-	-	-	-	7.12E-01	9.91E+00	1.98E+00	No	1.08E+00	1.50E+01	3.00E+00	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	3.94E+01	3.94E+01	7.89E+00	No	6.45E+02	6.45E+02	1.29E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.09E+00	1.09E+00	2.17E-01	No	1.92E+00	1.92E+00	3.84E-01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.31E-03	4.60E-02	9.21E-03	No	1.07E-02	1.48E-01	2.97E-02	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	3.46E+01	3.46E+01	6.91E+00	No	5.61E+02	5.61E+02	1.12E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.58E+01	1.58E+01	3.35E+00	No	4.04E+02	4.04E+02	8.07E+01	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.92E-03	6.85E-02	1.37E-02	No	2.95E-01	4.11E+00	8.22E-01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	6.86E-04	9.56E-03	1.91E-03	No	1.76E+00	2.45E+01	4.90E+00	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.35E+00	3.27E+01	6.54E+00	No	3.50E+00	4.88E+01	9.75E+00	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.0028	No	3.73E-05	5.20E-04	1.04E-04	No	3.74E-05	5.21E-04	1.04E-04	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.0028	No	3.73E-05	5.20E-04	1.04E-04	No	3.74E-05	5.21E-04	1.04E-04	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.0028	No	3.73E-05	5.20E-04	1.04E-04	No	3.74E-05	5.21E-04	1.04E-04	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.0028	No	3.73E-05	5.20E-04	1.04E-04	No	3.74E-05	5.21E-04	1.04E-04	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.0028	No	3.73E-05	5.20E-04	1.04E-04	No	3.74E-05	5.21E-04	1.04E-04	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.0028	No	3.73E-05	5.20E-04	1.04E-04	No	3.74E-05	5.21E-04	1.04E-04	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.0028	No	3.73E-05	5.20E-04	1.04E-04	No	3.74E-05	5.21E-04	1.04E-04	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	7.24E+02	7.24E+02	1.45E+02	No	2.33E+03	2.33E+03	4.67E+02	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	2.58E+01	2.58E+01	5.17E+00	No	4.09E+01	4.09E+01	8.19E+00	No

ATTACHMENT C: MIXING ZONE ANALYSIS

Mixing Zone Analysis Summary

REQUEST INFORMATION

request number: 3638

From: (Responsible Engineer) Alex Chavers | In Branch/Section: Industrial

Date Submitted: 7/8/2019 | Date Required: 8/7/2019 | FUND Code: 605

Date Permit application received by NPDES program: 2/28/2019

Receiving Waterbody: Tennessee River (Guntersville Lake)

Previous Stream Name:

Facility Name: WestRock CP - Stevenson (Name of Discharger-WQ will use to file)

Previous Discharger Name: Smurfit Stone Container Corp

River Basin: Tennessee | Outfall Latitude: 34.855000 (decimal degrees)

*County: Jackson | Outfall Longitude: -85.787050 (decimal degrees)

Permit Number: AL0022314 | Permit Type: Permit Reissuance

Permit Status: Active

Type of Discharger: INDUSTRIAL

Do other discharges exist that may impact the model? ☑ Yes ☐ No

If yes, impacting dischargers names.	Impacting dischargers permit numbers.
Hollywood WWTP	AL0062944
Scottsboro Southside WWTP	AL0031372
Section WWTP	AL0053619
Scottsboro Goose Pond WWTP	AL0054461

Existing Discharge Design Flow: 6.1 MGD

Proposed Discharge Design Flow: 8.05 MGD

Note: The flow rates given should be those requested for modeling.

Seasonal limits requested? ☐ Yes ☑ No

If not seasonal, only the summer sections will be used

Comments included ☑ Yes ☐ No

Information Verified By: JJM

Year File Was Started: 1984

12 Digit HUC Code: 060300010205

Use Classification: PWS / F&W

Site Visit Completed? ☑ Yes ☐ No

Date of MZ Response: 10/11/2019

Date of Site Visit: 9/3/2019

Hydrology

			Method Used to Calculate
Drainage Area	22826	sq mi	
Stream 7Q10	5719	cfs	ADEM Estimate w/TVA Data
Stream 1Q10	4289	cfs	ADEM Estimate w/TVA Data
Stream 7Q2	9442	cfs	ADEM Estimate w/TVA Data
Annual Average	35993	cfs	ADEM Estimate w/TVA Data

Date of MZ Analysis: 10/1/2019

Model Completed by: James Mooney

Pollutant Category

Whole Effluent Toxicity (WET) ☑ Thermal ☐ Pathogens ☐

Mixing Zone Analysis Summary

WET Parameters

Summer

Acute

Ambient Streamflow	4289	cfs
ZID Length	4.28	Meters
ZID IWC	15.2	%

Chronic

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Mixing Zone IWC		%

Winter

Acute

Ambient Streamflow		cfs
ZID Length	4.28	Meters
ZID IWC		%

Chronic

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Mixing Zone IWC		%

Thermal Parameters

Summer

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Max. Effluent Temp		°C

Winter

Ambient Streamflow		cfs
Mixing Zone Length		Meters
Max. Effluent Temp		°C

Pathogen Parameters

Summer

Ambient Streamflow		cfs
ZID Length		Meters
Max. Effluent Fecal Conc		Cols/100 mls
Max. Effluent E. coli Conc		Cols/100 mls
Monthly Average Effluent E. coli Conc		Cols/100 mls
Max. Effluent Enterococci Conc (for coastal waters)		Cols/100 mls

Winter

Ambient Streamflow		cfs
ZID Length		Meters
Max. Effluent Fecal Conc		Cols/100 mls
Max. Effluent E. coli Conc		Cols/100 mls
Monthly Average Effluent E. coli Conc		Cols/100 mls
Max. Effluent Enterococci Conc (for coastal waters)		Cols/100 mls

Comments and/or Notations

ZID distance of 4.28 meters is based on ZID criteria 50 x DLS. Individual plumes have not merged by the edge of the ZID (4.28 meters); therefore CORMIX 1 is the applicable model to evaluate mixing characteristics.

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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(334) 271-7700 ■ FAX (334) 271-7950

October 11, 2019

Memorandum:

To: Alex Chavers
Industrial/Municipal Branch
From: James Mooney
Water Quality Branch
RE: Westrock CP – Stevenson Mixing Zone (NPDES #AL0022314)

The Water Quality Branch has completed the Mixing Zone analysis for the Westrock CP – Stevenson discharge to the Tennessee River (Guntersville Lake). The use classification for the Tennessee River (Guntersville Lake) at the discharge location is Public Water Supply (PWS)/Swimming (S)/ Fish and Wildlife (F&W). A limiting dilution of 460: 1 was calculated using the design effluent flow rate of 8.05 MGD and a Tennessee River (Guntersville Lake) 7Q10 value of 5719 cfs. Therefore, based upon the established ADEM protocol for Whole Effluent Toxicity (WET) determination, acute toxicity limitations using the ambient 1Q10 flow are applicable at the edge of the ZID. The final ZID distance of 4.28 meters was determined based on the "fifty times the discharge length scale" criterion.

The Westrock CP – Stevenson discharge structure consists of a unidirectional multiport diffuser containing 12 individual ports. The individual plumes have not merged by the edge of the ZID. Therefore, CORMIX1 was utilized to evaluate the mixing characteristics. CORMIX1 predicts the instream waste concentration (IWC) at the edge of the ZID to be 15.20%.

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

CORMIX Mixing Zone Rationale

Facility: Westrock CP – Stevenson NPDES# AL0022314
Receiving Waterbody: Tennessee River (Guntersville Lake)
Date: 10/11/2019

Background:

A Mixing Zone evaluation was requested by Alex Chavers of the NPDES Industrial Section on July 8th, 2019 for the WestRock CP – Stevenson Plant discharge to the Tennessee River (Guntersville Lake). The use classification for the Tennessee River (Guntersville Lake) at the discharge location is Public Water Supply (PWS)/Swimming (S)/ Fish and Wildlife (F&W). The last Mixing Zone evaluation completed for this facility by the Department (2/1/2007) was a mixing zone review of a model completed by CH2M Hill submitted on behalf of the Smurfit Stone Stevenson Mill. Both a change in the ambient low flow conditions and an increase in the effluent flowrate (from 6.2 MGD up to 8.05 MGD) warrant a revised mixing zone model.

Ambient Conditions:

The low flow conditions for the Tennessee River (Guntersville Lake) used in this CORMIX modeling effort are provided in the table below:

Table 1. Low flow Statistics

Location:	Nickajack Dam	Guntersville Dam	Westrock CP-Steveson
Source of Data	TVA – Daily Flows	TVA – Daily Flows	TVA – Daily
Period Of Record	04/01/1980 to 03/31/2019	04/01/1980 to 03/31/2019	
Drainage Area @	21870	24450	22826
7Q10 (cfs)	5329.53	6380.09	5,719
7Q2 (cfs)	8663.08	10765.54	9,442
1Q10 (cfs)	3997.148	4785.068	4,289
Annual Average (cfs)	33460	40,296.06	35,993

The receiving waterbody width and depths were taken from ADEM Form 455. provided to the Department by the permittee :

Figure 1. Tennessee River (Lake Guntersville) Ambient Conditions

AMBIENT CONDITIONS

1. Receiving waterbody: Tennessee River
2. Width of waterbody at discharge point (m): approx. 437 m
3. Depth of waterbody at discharge point (m): 5.8 m
4. Average depth of waterbody at discharge point (m): 5.97 m

Applicable ZID / Mixing Zone Criteria:
A limiting dilution of 460: 1 was calculated using the effluent flow rate of 8.05 MGD and a Tennessee River (Guntersville Lake) 7Q10 value of 5719 cfs. Therefore, based upon the established ADEM protocol for Whole Effluent Toxicity (WET) determination, acute toxicity limitations using the ambient 1Q10 flow are applicable at the edge of the ZID. The ZID (Zone of Initial Dilution) shall not exceed the more stringent of the following requirements in any spatial direction (see ADEM Regs 335-6-6-.02-*ggg*):

1) Fifty times the Discharge Length Scale in any spatial direction.

The outfall configuration consist of a unidirectional multiport diffuser with a total of twelve individual ports, spaced 25 feet apart. Each discharge port has a 6 inch Tideflex Series 35d valve, catalog 206. For a tideflex port valve, the effective open area of the discharge port is a function of effluent flowrate. The total effluent flowrate is 8.05 MGD, or 5590 gallons per minute. Therefore the effluent flowrate through each port is 465 gallons per minute (5590 gpm / 12 ports). According to a representative from Tideflex Technologies, the effective port diameter is therefore 3.80 inches (0.3167 ft).

The resulting ZID criteria is 50 x $\sqrt{(\pi * (1.9)^2)}$ = 14.03 ft (or 4.28 meters)

2) Five times the local water depth in any horizontal direction

The depth at the discharge point was reported as 19.03 ft (5.8 meters). Therefore the resulting ZID criteria is 5 x 19.03 = 95.14 ft (29.0 meters)

3) No more than 10 % of the distance from the edge of the outfall structure to the leading edge of the Mixing Zone in any spatial direction.

Department regulations define the mixing zone as the most stringent of the following mixing zone prohibitions (see "Mixing Zone Prohibitions" in Departmental Regulations 335-6-6-.15):

a) Mixing Zones shall not exceed a width of 50 percent of the stream width.
b) Mixing Zones shall not exceed a length of five times the width of the mixing zone.
c) Mixing Zones shall not exceed an area of 25 percent of the stream cross-sectional area.

CORMIX2 was evaluated at the 7Q10 low flow condition to determine the applicable mixing zone based on the above three mixing zone prohibitions. The figures below summarize the mixing zone as identified by CORMIX session reports.

Figure 2. Mixing Zone: 50% of Stream Width

```
********************** REGULATORY MIXING ZONE SUMMARY ************************
The plume conditions at the boundary of the specified RMZ are as follows:
  Pollutant concentration              c = 0.759145  %
  Corresponding dilution               s = 131.7
  Plume location:                      x = 109.20 m
    (centerline coordinates)           y = 0 m
                                       z = 0 m
  Plume dimensions:       half-width (bh) = 109.25 m
                           thickness (bv) = 3.42 m
Cumulative travel time:        1506.9139 sec.
```

Figure 3. Mixing Zone: Length = 5 x MZ width

```
********************** REGULATORY MIXING ZONE SUMMARY ************************
The plume conditions at the boundary of the specified RMZ are as follows:
  Pollutant concentration              c = 0.616961  %
  Corresponding dilution               s = 162.1
  Plume location:                      x = 1092.5 m
    (centerline coordinates)           y = -142.49 m
                                       z = 0 m
  Plume dimensions:       half-width (bh) = 437 m
                           thickness (bv) = 2.10 m
Cumulative travel time:        17313.3164 sec.
```

Figure 4. Mixing Zone: 25% of Stream Cross Sectional Area of Stream Width

```
********************** REGULATORY MIXING ZONE SUMMARY ************************
The plume conditions at the boundary of the specified RMZ are as follows:
  Pollutant concentration              c = 0.869257  %
  Corresponding dilution               s = 115.0
  Plume location:                      x = 51.25 m
    (centerline coordinates)           y = 0 m
                                       z = 0 m
  Plume dimensions:       half-width (bh) = 63.80 m
                           thickness (bv) = 5.11 m
Cumulative travel time:        575.3840 sec.
```

Evaluating the output reveals the most stringent mixing zone is the following: Mixing Zones shall not exceed an area of 25 percent of the stream cross-sectional area. The distance from the outfall structure to the edge of the mixing zone is 51.25 meters. Therefore, 10% of the mixing zone distance is 5.125 meters.

Upon reviewing the ZID criteria, the applicable distance to the edge of the ZID is 14.03 feet (4.28 meters), based upon the criterion stating the ZID distance is equal to *"fifty times the discharge length scale in any spatial direction."*

Discharge Configuration:

The discharge structure consists of a unidirectional multiport diffuser containing 12 individual ports. The diffuser manifold is oriented 90 degrees perpendicular to the flow, and all ports are

oriented to point straight downstream (co-flowing) and are positioned to discharge horizontally, parallel to the water surface. Each port is positioned 1.83 meters above the river bottom. The diffuser manifold is located 101 meters (331.36 feet) from the right bank.

CORMIX Model Selection:
Typically, CORMIX2 is utilized to evaluate the mixing characteristics with a multiport diffuser. However, given instances when the individual plumes from a multiport diffuser have not merged together by the region of interest, CORMIX1 is the applicable program. As mentioned earlier, the discharge structure consists of 12 individual ports, spaced 25 feet apart. When evaluating the mixing characteristics of a single individual plume, 1/12th (for 12 total ports) of the effluent flowrate was used as input in CORMIX1.

The figure below illustrates the CORMIX1 plume characteristics when analyzing a single port:

Figure 5. CORMIX1 Plume conditions @ ZID (4.28 meters)

```
The plume conditions at the boundary of the specified RMZ are as follows:
  Pollutant concentration              c = 15.203190  %
  Corresponding dilution               s = 6.6
  Plume location:                      x = 4.28 m
    (centerline coordinates)           y = 0 m
                                       z = 0 m
  Plume dimensions:       half-width (bh) = 0.50 m
                           thickness (bv) = 0.99 m
Cumulative travel time < 1021.8334 sec. (RMZ is within NFR)
```

At the edge of the ZID located 4.28 meters downstream, the predicted plume halfwidth (bh) is 0.50 meters. The distance between individual ports on the diffuser manifold is 7.62 meters. Considering the plume halfwidth (0.5 meters) is less than ½ the distance between ports (3.81 meters), the individual plumes are not merged at the edge of the ZID. In addition, the CORMIX2 model states in the session report: *"The specified RMZ is less than the port spacing SPAC. The user is advised to perform CORMIX1 (single port discharge) analysis for an individual port. This may give more realistic predictions at the RMZ"*. Therefore, CORMIX1 is the applicable program to evaluate the plume conditions at the edge of the ZID.

CORMIX Output Evaluation
The effluent density is 1019.35 kg/m3, which is greater than the calculated ambient water density of 996.23 kg/m3. Therefore, the plume is negatively buoyant, and as expected CORMIX1 predicts the plume to sink towards the bottom. CORMIX1 predicts coanda attachment of the plume with the river bottom immediately after discharge; furthermore, the discharge configuration is hydrodynamically "unstable", that is, the discharge strength (measured by its momentum flux) dominates the flow in relation to the limited layer depth.

At the edge of the ZID (4.28 meters), the plume has spread in the horizontal plane such that the total plume width is only 1.0 meter. CORMIX1 predicts the instream waste concentration (IWC) at the edge of the ZID to be 15.203%

Figure 2. CORMIX1 Flow Classification: NH5

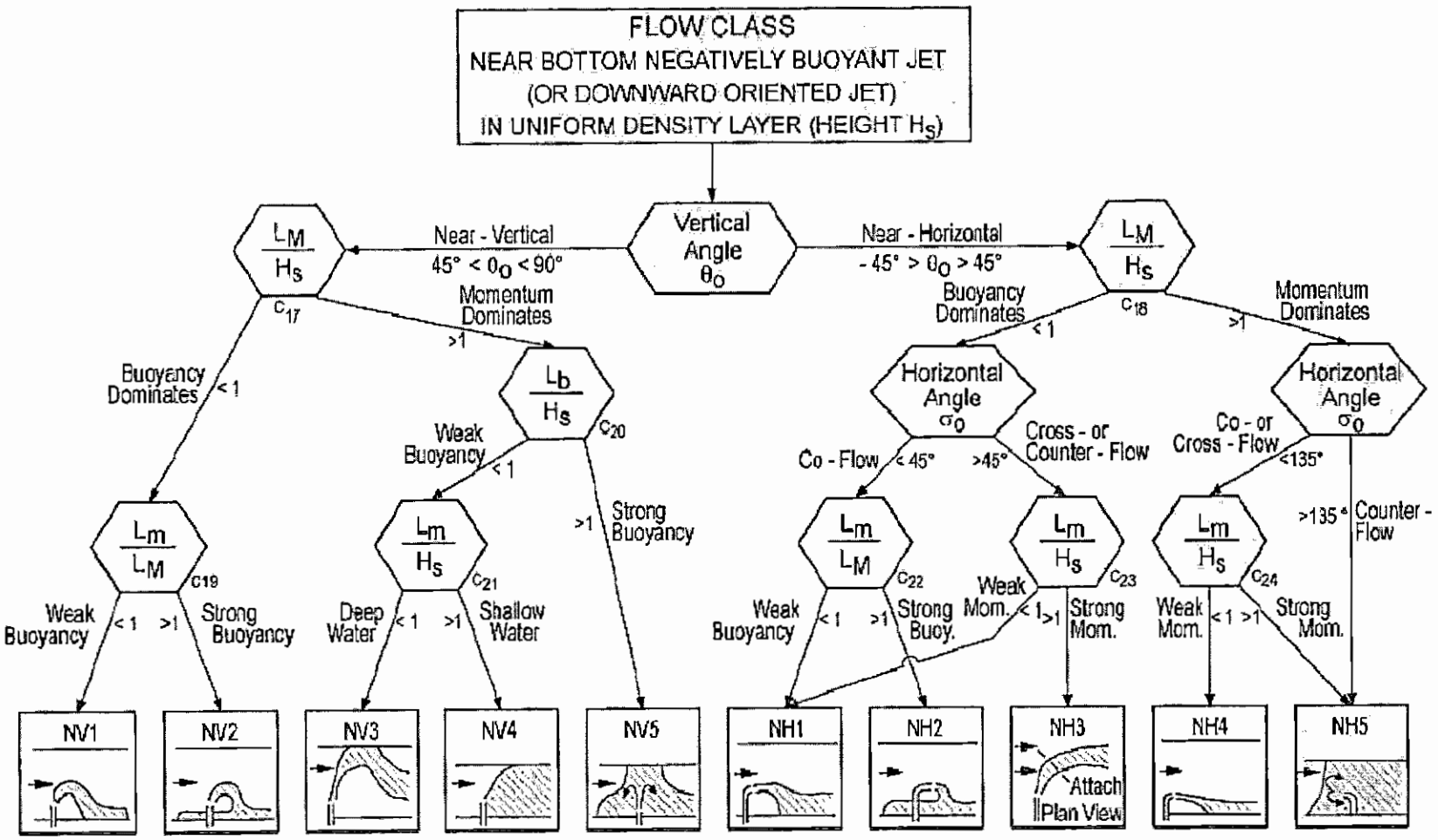
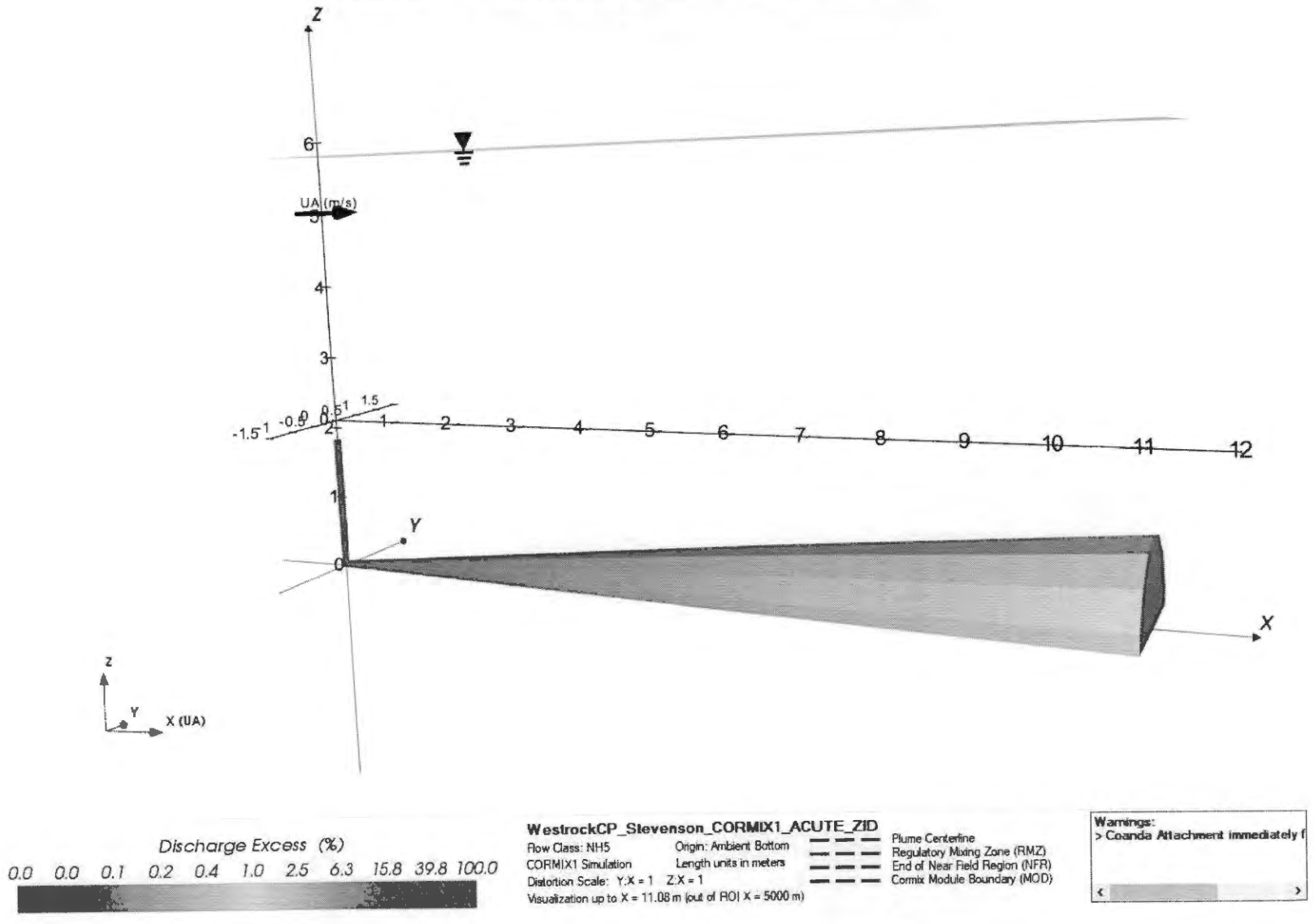


Figure 2. CorVue: Westrock CP – Stevenson CORMIX1



ATTACHMENT D: WASTE LOAD ALLOCATION

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3638

From:	Alex Chavers	**In Branch/Section**	Industrial		
Date Submitted	7/8/2019	**Date Required**	8/7/2019	**FUND Code**	605
Date Permit application received by NPDES program	2/28/2019				
Receiving Waterbody	Tennessee River (Guntersville Lake)				
Previous Stream Name					
Facility Name	WestRock CP - Stevenson	(Name of Discharger-WQ will use to file)			
	Smurfit Stone Container Corp	Previous Discharger Name			
River Basin	Tennessee	**Outfall Latitude**	34.855000	(decimal degrees)	
***County**	Jackson	**Outfall Longitude**	-85.787050	(decimal degrees)	
Permit Number	AL0022314	**Permit Type**	Permit Reissuance		
		Permit Status	Active		
		Type of Discharger	INDUSTRIAL		

Do other discharges exist that may impact the model? ☑ Yes ☐ No

If yes, impacting dischargers names.	**Impacting dischargers permit numbers.**
Hollywood WWTP	AL0062944
Scottsboro Southside WWTP	AL0031372
Section WWTP	AL0053619
Scottsboro Goose Pond WWTP	AL0054461

Existing Discharge Design Flow	6.1	MGD
Proposed Discharge Design Flow	8.05	MGD

Note: The flow rates given should be those requested for modeling.

Comments included ☑ Yes ☐ No

Information Verified By JJM

Year File Was Created 1984

Response ID Number 1716

Lat/Long Method Municipal/Industrial

12 Digit HUC Code	060300010205		
Use Classification	PWS / S / F&W		
Site Visit Completed?	☑ Yes ☐ No	**Date of Site Visit**	9/3/2019
Waterbody Impaired?	☑ Yes ☐ No	**Date of WLA Response**	10/10/2019
Antidegradation	☐ Yes ☑ No	**Approved TMDL?**	☐ Yes ☑ No
Waterbody Tier Level	Tier I		
Use Support Category	5	**Approval Date of TMDL**	

Waste Load Allocation Information

Modeled Reach Length	28.5	**Miles**	**Date of Allocation**	10/2/2019	
Name of Model Used	QUAL2K		**Allocation Type**	Annual	
Model Completed by	James Mooney		**Type of Model Used**	Data-based	
Allocation Developed by	Water Quality Branch				

Waste Load Allocation Summary

Annual Effluent Limits

Qw	8.05	MGD
CBOD5	214.5	mg/L
NH3-N		
TKN		
D.O.	0	mg/L

Conventional Parameters

	Qw	MGD	Qw	MGD
Season				
From				
Through				
CBOD5			CBOD5	
NH3-N			NH3-N	
TKN			TKN	
D.O.			D.O.	

Other Parameters

	Qw	MGD	Qw	MGD
Season			Season	
From			From	
Through			Through	
TP			TP	
TN			TN	
TSS			TSS	

"Monitor Only" Parameters for Effluent:

Parameter	Frequency	Parameter	Frequency
TP	Monthly	DO	Monthly
TKN	Monthly	NH3-N	Weekly
NO2+NO3-N	Monthly		

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	2	mg/l		mg/l
NH3-N	0.11	mg/l		mg/l
Temperature	28	°C		°C
pH	7	su		su

Hydrology at Discharge Location

			Method Used to Calculate
Drainage Area	22826	sq mi	
Stream 7Q10	5719	cfs	ADEM Estimate w/TVA Data
Stream 1Q10	4289	cfs	ADEM Estimate w/TVA Data
Stream 7Q2	9442	cfs	ADEM Estimate w/TVA Data
Annual Average	35993	cfs	ADEM Estimate w/TVA Data

Drainage Area Qualifier: Estimated

Comments and/or Notations: CBOD5 concentration limit of 215.4 mg/l was calculated based on maintaining the categorical based effluent load of 14,461 lbs/day, given the increased effluent flowrate of 8.05 MGD (and F-ratio of 7.5). The Qual2k model predicts that further assimilative capacity is available in the Tennessee River; however, CBOD5 effluent limits inputs for Westrock CP- Steveson are reflective of their currently permitted categorical guideline values.

LANCE R. LEFLEUR
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October 10, 2019

Memorandum:

To: Alex Chavers
Industrial/Municipal Branch
From: James Mooney
Water Quality Branch
RE: Westrock CP – Stevenson WLA (NPDES #AL0022314)

The Water Quality Branch has completed the Waste Load Allocation (WLA) for the Westrock CP - Stevenson discharge to the Tennessee River (Guntersville Lake). The Qual2k model was utilized to evaluate the necessary effluent limitations. The use classification for the Tennessee River (Guntersville Lake) at the discharge location is Public Water Supply (PWS)/Swimming (S)/ Fish and Wildlife (F&W). Departmental regulations dictate the following in regards to applicable dissolved oxygen criteria for the use classifications: *"For a diversified warm water biota, including game fish, daily dissolved oxygen concentrations shall not be less than 5 mg/l at all times" (335-6-10-.09).*

The table below depicts the effluent limitations for Westrock CP- Stevenson that are expected to be protective of water quality. Note the CBOD5 concentration limit of 215.4 mg/l was calculated based on maintaining the categorical based effluent load of 14,461 lbs/day, given the increased effluent flowrate of 8.05 MGD (and F-ratio of 7.5). The Qual2k model predicts that further assimilative capacity is available in the Tennessee River; however, CBOD5 effluent limit inputs for Westrock CP- Stevenson are reflective of their currently permitted categorical guideline values.

Westrock CP - Stevenson NPDES# AL0022314
Qw = 8.05 MGD

Parameter	Effluent Limit
CBOD5 (mg/l):	215.4
Minimum Dissolved Oxygen (mg/l)	0

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

Waste Load Allocation Rationale

Facility: Westrock CP - Stevenson

Discharge Location: 34.855, -85.781111

Receiving Waterbody: Tennessee River (Guntersville Lake)

Effluent Flow Rate: 8.05 MGD

Date: October 10, 2019

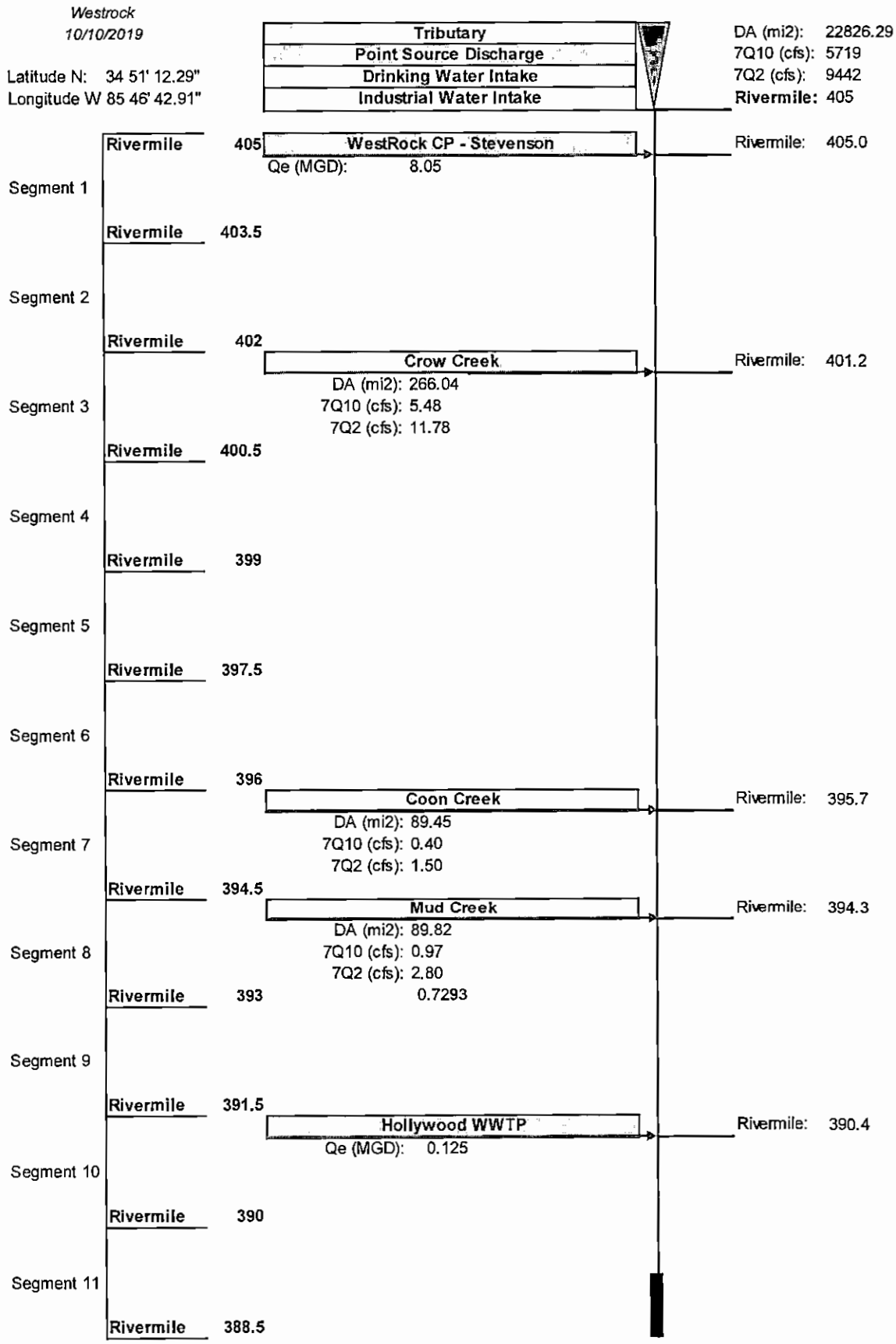
Background

An annual WLA was requested by Alex Chavers of the NPDES Industrial Section on July 8th, 2019 for the WestRock CP – Stevenon Plant discharge to the Tennessee River. The use classification for the Tennessee River (Guntersville Lake) at the discharge location is Public Water Supply (PWS)/Swimming (S)/ Fish and Wildlife (F&W). Departmental regulations dictate the following in regards to applicable dissolved oxygen criteria for the use classifications: *"For a diversified warm water biota, including game fish, daily dissolved oxygen concentrations shall not be less than 5 mg/l at all times" (335-6-10-.09)*

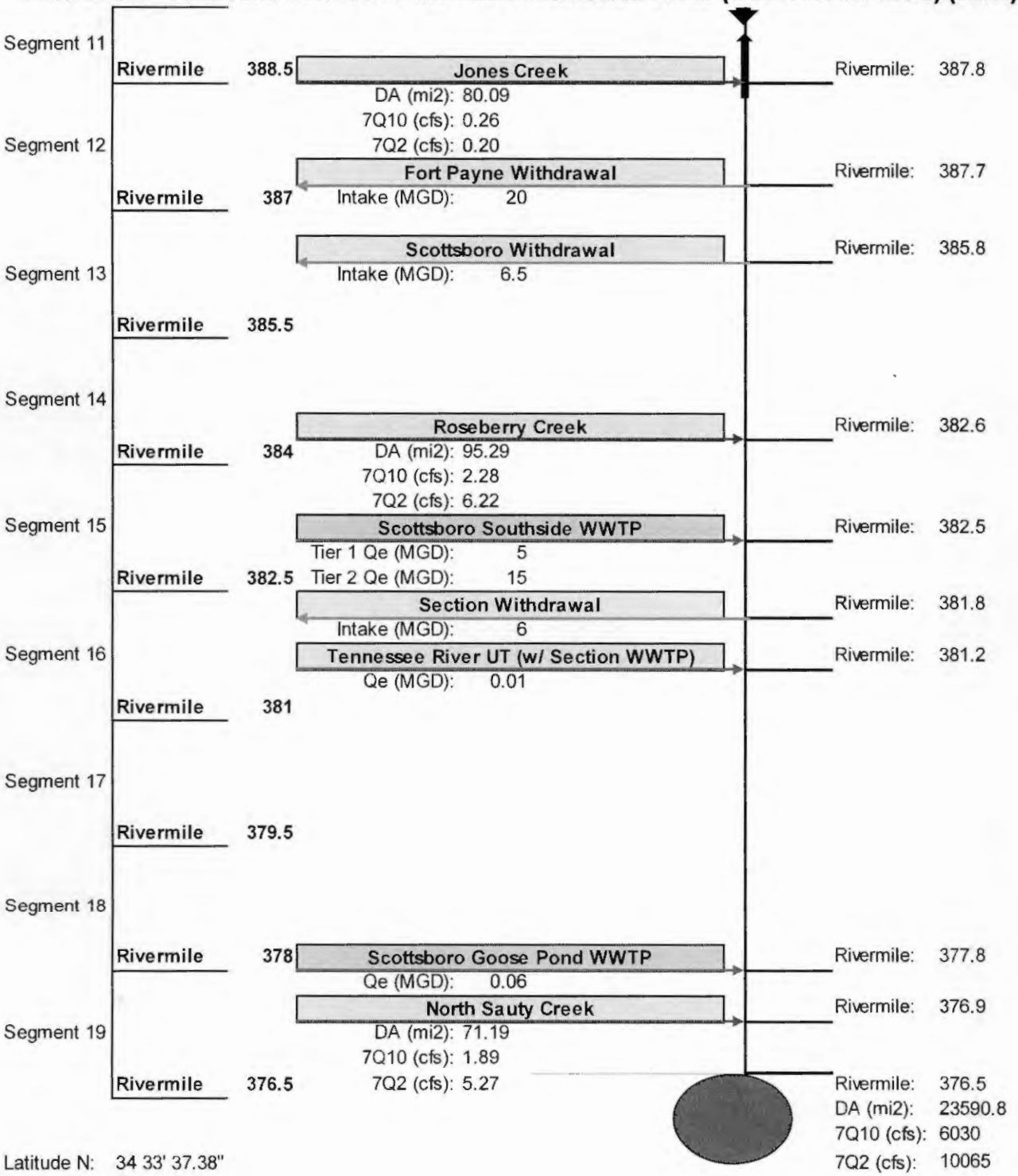
Modeled Reach Description

Previously, the Qual2e model was utilized to evaluate waste load allocations for point source discharges to the upper Tennessee River (Guntersville Lake). For this modeling effort, the Qual2e modeled segments and reaches were transferred to the Windows based Qual2k model. The Qual2k modeled reach consists of 19 segments totaling 28.5 rivermiles. The model reach begins at the Westrock CP – Stevenson discharge and ends on the Tennessee River (Guntersville Lake) at rivermile 376.5. The modeled reach schematic is illustrated on the following page. Tributary inflows, drinking water intake flowrates, industrial water withdrawal flowrates, municipal wastewater effluent flowrates, and industrial effluent flowrates and concentrations were all evaluated and updated as necessary. See the following pages for specific information relating to these changes.

Westrock CP – Stevenson Reach Schematic Tennessee River (Guntersville Lake)



Westrock CP – Stevenson Reach Schematic Tennessee River (Guntersville Lake) (cont)



Latitude N: 34 33' 37.38"
Longitude W 86 5' 54.06"

Low flow Statistics – Tennessee River:

Location:	Nickajack Dam	Guntersville Dam	Westrock CP-Steveson
Source of Data	TVA – Daily Flows	TVA – Daily Flows	TVA – Daily Flows
Period Of Record	04/01/1980 to 03/31/2019	04/01/1980 to 03/31/2019	
Drainage Area (mi2):	21870	24450	22826
7Q10 (cfs)	5329.53	6380.09	5,719
7Q2 (cfs)	8663.08	10765.54	9,442
1Q10 (cfs)	3997.148	4785.068	4,289
Annual Average (cfs)	33460	40,296.06	35,993

Low flow Statistics – Tributaries:

Crow Creek: D.A. = 266.04 mi^2

The low flow statistics for Crow Creek were determined from USGS Gage 03572110

USGS Gage #:	03572110
USGS Gage Description:	Crow Creek at Bass
Period Of Record	5/22/1975 to 10/14/1996
Drainage Area @ Gage (mi2):	131
7Q10 (cfs)	2.7
7Q2 (cfs)	5.8
1Q10 (cfs)	2.3

Low Flow statistics calculated by ratio of drainage area

Location	Crow Creek at mouth
Receiving Waterbody:	Crow Creek
Drainage Area @ POI (mi2):	266.04
7Q10 (cfs)	5.48
7Q2 (cfs)	11.78
1Q10 (cfs)	4.11

Coon Creek: D.A. = 89.45 mi^2

The Bingham equation was utilized to calculate low flow statistics.

Bingham 7Q10 & 7Q2 Calculations

Creek Name & Location: **Shoal Creek at mouth**

G =	32		Streamflow Recession Index		
A =	74.63		Contributing Drainage Area in (sq. mi)		
P =	57		Mean Annual Precipitation in (in.)		
7Q10 =	0.08	cfs	7Q2 =	0.42	cfs

G =	50		Streamflow Recession Index		
A =	14.77		Contributing Drainage Area in (sq. mi)		
P =	57		Mean Annual Precipitation in (in.)		
7Q10 =	0.32	cfs	7Q2 =	1.08	cfs

7Q10 =	**0.40**	**cfs**
1Q10=	**0.30**	**cfs**
7Q2 =	**1.50**	**cfs**

Mud Creek: D.A. = 89.82 mi^2

The low flow statistics for Mud Creek were determined from USGS Gage 03572300

USGS Gage #:	03572300
USGS Gage Description:	Mud Creek near Scottsboro
Period Of Record	partial record gage
Drainage Area @ Gage (mi2):	73.9
7Q10 (cfs)	0.8
7Q2 (cfs)	2.3
1Q10 (cfs)	0.6

Low Flow statistics calculated by ratio of drainage area

Location	Mud Creek at mouth
Receiving Waterbody:	Mud Creek
Drainage Area @ POI (mi2):	89.82
7Q10 (cfs)	0.97
7Q2 (cfs)	2.80
1Q10 (cfs)	0.73

Jones Creek: D.A. = 80.09 mi^2

The Bingham equation was utilized to calculate low flow statistics.

Bingham 7Q10 & 7Q2 Calculations

Creek Name & Location: **Shoal Creek at mouth**

G =	32		Streamflow Recession Index		
A =	71.13		Contributing Drainage Area in (sq. mi)		
P =	57		Mean Annual Precipitation in (in.)		
7Q10 =	0.08	cfs	7Q2 =	0.40	cfs

G =	50		Streamflow Recession Index		
A =	8.91		Contributing Drainage Area in (sq. mi)		
P =	57		Mean Annual Precipitation in (in.)		
7Q10 =	0.19	cfs	7Q2 =	0.67	cfs

7Q10 =	**0.26**	**cfs**
1Q10=	**0.20**	**cfs**
7Q2 =	**1.07**	**cfs**

Roseberry Creek: D.A. = 95.29 mi^2

The Bingham equation was utilized to calculate low flow statistics.

Bingham 7Q10 & 7Q2 Calculations

Creek Name & Location: **Shoal Creek at mouth**

G =	50		Streamflow Recession Index		
A =	95.29		Contributing Drainage Area in (sq. mi)		
P =	57		Mean Annual Precipitation in (in.)		
7Q10 =	2.28	cfs	7Q2 =	6.22	cfs

Tennessee River UT (w/ Section WWTP): D.A. = 1.50 mi^2

The tributary conditions were determined by the model Section WWTP – UT to Tennessee River
Date of Allocation: 8/9/2011
Flow (including point sources) = 0.0155 cfs
Flow (without point sources) = 0 cfs
Flow = 0.0155 cfs
$CBOD_U$ = 20.7248 mg/L TON = 2.5 mg/L
NH_3-N = 1.3388 mg/L D.O. = 7.4760 mg/L

North Sauty Creek: D.A. = 71.19 mi^2

The Bingham equation was utilized to calculate low flow statistics.

Bingham 7Q10 & 7Q2 Calculations

Creek Name & Location: **Shoal Creek at mouth**

G =	50		Streamflow Recession Index		
A =	71.19		Contributing Drainage Area in (sq. mi)		
P =	59		Mean Annual Precipitation in (in.)		
7Q10 =	1.89	cfs	7Q2 =	5.27	cfs

The tributary water quality concentrations for Temperature, Dissolved Oxygen, Ultimate CBOD, Ammonia Nitrogen, and Total Organic Nitrogen were based upon the standard assumed values typically utilized in WLA modeling efforts. The table below illustrates the source of the tributary Nitrate-Nitrite (NOx), Organic Phosphorus, and Inorganic Phosphorus concentration utilized as input in the Qual2k model:

	Qual2k Tributary Parameter Source		
Waterbody	**Nitrate-Nitrite (NOX)**	**Organic Phosphorus**	**Inorganic Phosphorus**
Headwater	ADEM Station TENR-406 Average NOX: 266 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Avg TP - Avg DRP : 9 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Average DRP: 15 (ug/l) (n = 21, 2013-2018)
Diffuse Sources (i.e. Incremental Flow)	ADEM Station TENR-406 Average NOX: 266 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Avg TP - Avg DRP : 9 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Average DRP: 15 (ug/l) (n = 21, 2013-2018)
Crow Creek	RRMP station GUNM-1 Average NOX: 90 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-1 Avg TP - Avg DRP: 14 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-1 Average DRP: 6 (ug/l) (n = 22, 2013-2018)
Coon Creek	RRMP station GUNM-2 Average NOX: 76 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-2 Avg TP - Avg DRP: 16 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-2 Average DRP: 3 (ug/l) (n = 22, 2013-2018)
Mud Creek	RRMP station GUNM-1 Average NOX: 90 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-1 Avg TP - Avg DRP: 14 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-1 Average DRP: 6 (ug/l) (n = 22, 2013-2018)
Jones Creek	RRMP station GUNM-2 Average NOX: 76 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-2 Avg TP - Avg DRP: 16 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-2 Average DRP: 3 (ug/l) (n = 22, 2013-2018)
Roseberry Creek	RRMP station GUNM-4 Average NOX: 14 (ug/l) (n = 21, 2013-2018)	RRMP station GUNM-4 Avg TP - Avg DRP: 25 (ug/l) (n = 21, 2013-2018)	RRMP station GUNM-4 Average DRP: 3 (ug/l) (n = 21, 2013-2018)
UT to Tennessee River (w/ Section WWTP)	ADEM Station TENR-406 Average NOX: 266 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Avg TP - Avg DRP : 9 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Average DRP: 15 (ug/l) (n = 21, 2013-2018)
UT to Tennessee River (w/ Awesome Properties)	ADEM Station TENR-406 Average NOX: 266 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Avg TP - Avg DRP : 9 (ug/l) (n = 21, 2013-2018)	ADEM Station TENR-406 Average DRP: 15 (ug/l) (n = 21, 2013-2018)
North Sauty Creek	RRMP station GUNM-5 Average NOX: 39 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-5 Avg TP - Avg DRP: 20 (ug/l) (n = 22, 2013-2018)	RRMP station GUNM-5 Average DRP: 3 (ug/l) (n = 22, 2013-2018)

Headwater Inputs

The headwater water quality concentrations for Temperature, Dissolved Oxygen, Ultimate CBOD, Ammonia Nitrogen, and Total Organic Nitrogen were based upon the standard assumed values typically utilized in WLA modeling efforts. As Illustrated in the table above, the source of the mainstem headwater water quality inputs for Nitrate-Nitrite, Organic Phosphorus, and Inorganic Phosphorus were based on actual water quality results from mainstem Tennnessee River station TENR-406.

Diffuse Sources (i.e. Incremental Flow)

Incremental flows were calculated by subtracting the end of model reach 7Q10 flow of 6030 cfs minus the summation of tributary Flow (without point sources) and the start of modeled reach flow of 5719 cfs. The resulting flowrate of 299.71 cfs (8.4868 cms) was evenly distributed among all 19 segments (all 19 segments are the same length), resulting in a flowrate of 15.77 cfs (0.4467 cms) per segment. Water quality concentrations for diffuse sources were set equal to those concentrations used for the headwater sources.

WATER INTAKES:

The table below illustrates the drinking water surface intakes along the modeled reach of the Tennessee River. Note, input water quality concentrations shown in grey are based on the normal assumed values for steady state modeling efforts.

Drinking Water Sources:

Facility	Intake Flow (MGD)	River Mile	CBODu mg/l	NH3-N ug/L	TON ug/l	DO (mg/l)
Fort Payne Water Works Board	20	387.7	2	110	220	6.65
Scottsboro Water Board	6.5	385.8	2	110	220	6.65
Section and Dutton Water Board	6	381.8	2	110	220	6.65

Municipal Wastewater Discharges:

Unless otherwise noted (see below), all effluent flowrates and concentrations below are based on a 5 year (2015 - 2019) average of DMR values.

Effluent Permit Limitation Assumed based on BPJ

Facility	Permit #	Flow MGD	DO mg/l	CBOD5 mg/l	F-Ratio	CBODu mg/l	NH3N ug/l	Org N ug/l	NOX ug/l	TP ug/l	DRP ug/l	ORGP ug/l
		Permit	*Permit*	*Permit*	*WLA*	*Permit*	*Permit*	*WLA*	*90th %ile DMRs*	*90th %ile DMRs*	*80% of TP*	*20% of TP*
Hollywood WWTP	AL0062944	0.125	0	25	1.5	37.5	20000	20000	28500	6500	5200	1040
Scottsboro Southside WWTP	AL0031372	15	0	25	1.5	37.5	20000	20000	7900	3130	2504	500.8
Scottsboro Goose Pond WWTP	AL0054461	0.06	0	25	1.5	37.5	20000	20000	14700	7280	5824	1164.8

Industrial Wastewater Discharges:

Unless otherwise noted (see below), all effluent flowrates and concentrations below are based on a 5 year (October 2013 - October 2018) average of DMR values.

Effluent Permit Limitation	Assumed based on BPJ	Taken from Permit Application, EPA Form 2C

				Qual2k Input	Daily Max	Monthly Average	*Based on LTA flow and Monthly Avg Effluent Limit*		*Qual2k Input*
Facility	**Permit #**	**Outfall #**	**LTA Discharge (MGD)**	**LTA Discharge (m3/sec)**	**BOD_5 Permitted (lbs/day)**	**BOD_5 Permitted (lbs/day)**	**BOD_5 (mg/l)**	**F-Ratio**	**$CBOD_U$ (mg/l)**
Westrock CP-Steveson	AL0022314	DSN001	8.05	0.4235	28,902	14,461	215.40	7.5	1615.47

				Qual2k Input	Daily Max	Monthly Average	*Qual2k Input*	*Qual2k Input*
Facility	**Permit #**	**Outfall #**	**LTA Discharge (MGD)**	**LTA Discharge (m3/sec)**	**NH_3-N Permitted (lbs/day)**	**NH_3-N Permitted (lbs/day)**	**NH3-N ug/L** *LTA Average*	**TON ug/L** *= TKN LTA - NH3-N LTA*
Westrock CP-Steveson	AL0022314	DSN001	8.05	0.4235	Monitor	None	2103.5	6022.5

					Qual2k Input	*Qual2k Input*	*Qual2k Input*	*Qual2k Input*
Facility	**Permit #**	**Outfall #**	**LTA Discharge (MGD)**	**TP ug/L** *LTA Average*	**DRP ug/L** *80% of TP LTA*	**ORG P ug/L** *20 % of TP LTA*	**NOX ug/L** *LTA Average*	**DO mg/L** *LTA Average*
Westrock CP-Steveson	AL0022314	DSN001	8.05	1871	1497	374	3454.25	0

Qual2k Model Inputs

Reach Hydrologic Characteristics

Input velocities in Qual2k were based upon the relationship between measured segment cross sectional area and modeled flowrates (Velocity = Flow/Area). Segment Depths and Widths were kept the same as from previous modeling efforts. The table below illustrates the calculated segment velocities that were used as input in to the Qual2k model:

								Qual2k Output	*Qual2k Input*
Segment	**Rivermile Start**	**Rivermile End**	**Depth (ft)**	**Width (miles)**	**Width (ft)**	**Area (ft2)**	**Area (m2)**	**Flow (cms)**	**Velocity (cms)**
1	RM 405	RM 403.5	15	0.23	1224.96	18374.40	1707.04	162.50	0.0952
2	RM 403.5	RM 402	15	0.16	860.64	12909.60	1199.34	162.98	0.1359
3	RM 402	RM 400.5	15	0.14	739.20	11088.00	1030.11	163.50	0.1587
4	RM 400.5	RM 399	15	0.23	1193.28	17899.20	1662.89	164.03	0.0986
5	RM 399	RM 397.5	15	0.22	1177.44	17661.60	1640.82	164.47	0.1002
6	RM 397.5	RM 396	15	0.24	1272.48	19087.20	1773.26	164.92	0.0930
7	RM 396	RM 394.5	15	0.19	1024.32	15364.80	1427.44	165.38	0.1159
8	RM 394.5	RM 393	15	0.28	1452.00	21780.00	2023.43	165.85	0.0820
9	RM 393	RM 391.5	15	0.29	1525.92	22888.80	2126.44	166.75	0.0784
10	RM 391.5	RM 390	15	0.29	1507.80	22617.00	2101.19	167.20	0.0796
11	RM 390	RM 388.5	15	0.26	1367.52	20512.80	1905.70	167.21	0.0877
12	RM 388.5	RM 387	15	0.25	1304.16	19562.40	1817.41	167.15	0.0920
13	RM 387	RM 385.5	15	0.29	1504.80	22572.00	2097.01	167.38	0.0798
14	RM 385.5	RM 384	15	0.28	1478.40	22176.00	2060.22	167.84	0.0815
15	RM 384	RM 382.5	15	0.25	1320.00	19800.00	1839.48	168.85	0.0918
16	RM 382.5	RM 381	15	0.26	1378.08	20671.20	1920.42	169.18	0.0881
17	RM 381	RM 379.5	15	0.26	1393.92	20908.80	1942.49	169.63	0.0873
18	RM 379.5	RM 378	15	0.22	1172.16	17582.40	1633.46	170.10	0.1041
19	RM 378	RM 376.5	15	0.23	1214.40	18216.00	1692.32	163.38	0.0965

The table on the following page illustrates the water column rates used in the Qual2k model. The default rates were used for all parameters with the exception of the reaeration wind effect. The default model parameter for reaeration wind effect was set to none, meaning that no dissolved oxygen reaeration from wind was included. However, based on the widths of the modeled reach, the reaeration of dissolved oxygen in the water column from wind sources was considered a realistic assumption and therefore internally simulated in the model. A global wind speed of 2.0 m/sec was used as input for all reaches.

Qual2k Water Column Rates/Kinetics

Parameter	Value	Units	Symbol
Stoichiometry:			
Carbon	40	gC	gC
Nitrogen	7.2	gN	gN
Phosphorus	1	gP	gP
Dry weight	100	gD	gD
Chlorophyll	1	gA	gA
Inorganic suspended solids:			
Settling velocity	0.1	m/d	v_i
Oxygen:			
Reaeration model	Internal		
User reaeration coefficient α	3.93		α
User reaeration coefficient β	0.5		β
User reaeration coefficient γ	1.5		γ
Temp correction	1.024		θ_a
Reaeration wind effect	Banks-Herrera		
O2 for carbon oxidation	2.69	gO_2/gC	r_{oc}
O2 for NH4 nitrification	4.57	gO_2/gN	r_{on}
Oxygen inhib model CBOD oxidation	Exponential		
Oxygen inhib parameter CBOD oxidation	0.60	L/mgO2	K_{socf}
Oxygen inhib model nitrification	Exponential		
Oxygen inhib parameter nitrification	0.60	L/mgO2	K_{sona}
Oxygen enhance model denitrification	Exponential		
Oxygen enhance parameter denitrification	0.60	L/mgO2	K_{sodn}
Oxygen inhib model phyto resp	Exponential		
Oxygen inhib parameter phyto resp	0.60	L/mgO2	K_{sop}
Oxygen enhance model bot alg resp	Exponential		
Oxygen enhance parameter bot alg resp	0.60	L/mgO2	K_{sob}
Slow CBOD:			
Hydrolysis rate	0	/d	k_{hc}
Temp correction	1.07		θ_{hc}
Oxidation rate	0	/d	k_{dcs}
Temp correction	1.047		θ_{dcs}
Fast CBOD:			
Oxidation rate	0.09	/d	k_{dc}
Temp correction	1.047		θ_{dc}
Organic N:			
Hydrolysis	0.015	/d	k_{hn}
Temp correction	1.07		θ_{hn}
Settling velocity	0.0005	m/d	v_{on}
Ammonium:			
Nitrification	0.08	/d	k_{na}
Temp correction	1.07		θ_{na}
Nitrate:			
Denitrification	0.1	/d	k_{dn}
Temp correction	1.07		θ_{dn}
Sed denitrification transfer coeff	0.8	m/d	v_{di}
Temp correction	1.07		θ_{di}
Organic P:			
Hydrolysis	0.03	/d	k_{hp}
Temp correction	1.07		θ_{hp}
Settling velocity	0.001	m/d	v_{op}
Inorganic P:			
Settling velocity	0.8	m/d	v_{ip}
Inorganic P sorption coefficient	1000	L/mgD	K_{dpi}
Sed P oxygen attenuation half sat constant	1	mgO_2/L	k_{spi}

Parameter	Value	Units	Symbol
Phytoplankton:			
Max Growth rate	3.8	/d	k_{gp}
Temp correction	1.07		θ_{gp}
Respiration rate	0.15	/d	k_{rp}
Temp correction	1.07		θ_{rp}
Excretion rate	0.3	/d	k_{ep}
Temp correction	1.07		θ_{dp}
Death rate	0.1	/d	k_{dp}
Temp correction	1.07		θ_{dp}
External Nitrogen half sat constant	100	ugN/L	k_{sNp}
External Phosphorus half sat constant	10	ugP/L	k_{sNp}
Inorganic carbon half sat constant	1.30E-05	moles/L	k_{sCp}
Light model	Half saturation		
Light constant	250	langleys/d	K_{Lp}
Ammonia preference	25	ugN/L	k_{hnxp}
Subsistence quota for nitrogen	0	mgN/mgA	q_{0Np}
Subsistence quota for phosphorus	0	mgP/mgA	q_{0Pp}
Maximum uptake rate for nitrogen	0	mgN/mgA/d	ρ_{mNp}
Maximum uptake rate for phosphorus	0	mgP/mgA/d	ρ_{mPp}
Internal nitrogen half sat constant	0	mgN/mgA	K_{qNp}
Internal phosphorus half sat constant	0	mgP/mgA	K_{qPp}
Settling velocity	0	m/d	v_a
Bottom Algae:			
Growth model	Zero-order		
Max Growth rate	200	mgA/m^2/d or /d	C_{gb}
Temp correction	1.07		θ_{gb}
First-order model carrying capacity	1000	mgA/m^2	$a_{b,max}$
Respiration rate	0.2	/d	k_{rb}
Temp correction	1.07		θ_{rb}
Excretion rate	0.12	/d	k_{eb}
Temp correction	1.07		θ_{db}
Death rate	0.1	/d	k_{db}
Temp correction	1.07		θ_{db}
External nitrogen half sat constant	300	ugN/L	k_{sNb}
External phosphorus half sat constant	100	ugP/L	k_{sNb}
Inorganic carbon half sat constant	1.30E-05	moles/L	k_{sCb}
Light model	Half saturation		
Light constant	100	langleys/d	K_{Lb}
Ammonia preference	25	ugN/L	k_{hnxb}
Subsistence quota for nitrogen	0.72	mgN/mgA	q_{0N}
Subsistence quota for phosphorus	0.1	mgP/mgA	q_{0P}
Maximum uptake rate for nitrogen	72	mgN/mgA/d	ρ_{mN}
Maximum uptake rate for phosphorus	5	mgP/mgA/d	ρ_{mP}
Internal nitrogen half sat constant	0.9	mgN/mgA	K_{qN}
Internal phosphorus half sat constant	0.13	mgP/mgA	K_{qP}
Detritus (POM):			
Dissolution rate	0.23	/d	k_{dt}
Temp correction	1.07		θ_{dt}
Fraction of dissolution to fast CBOD	1.00		F_f
Settling velocity	0.008	m/d	v_{dt}
Pathogens:			
Decay rate	0.8	/d	k_{dx}
Temp correction	1.07		θ_{dx}
Settling velocity	1	m/d	v_x
Light efficiency factor	1.00		α_{path}
pH:			
Partial pressure of carbon dioxide	347	ppm	p_{CO2}

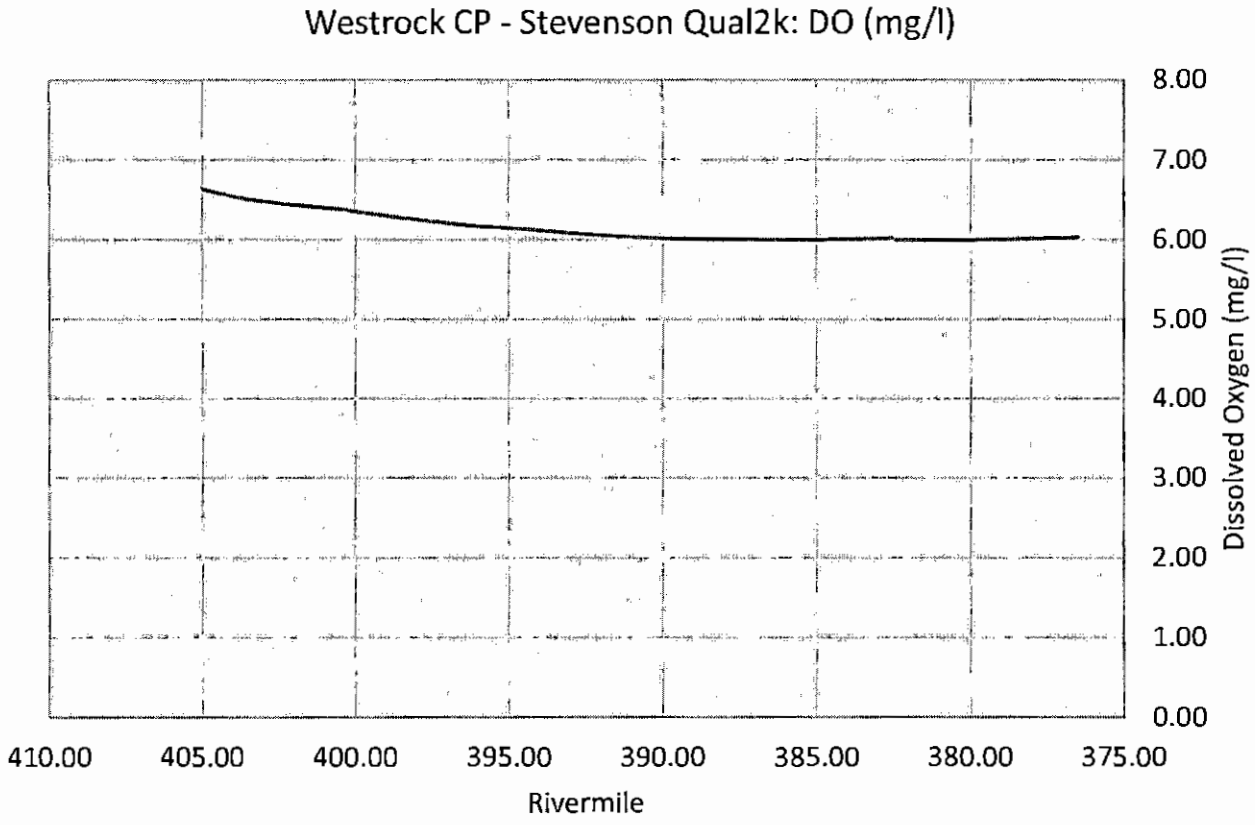
Qual2k Water Light Parameters and Surface Heat Transfer Models

The table below illustrates the input parameters for the Light and Surface Heat models utilized in Qual2k. The default inputs were used for all parameters. Typically, a constant temperature is used in the Department's steady state modeling efforts. In order to counteract the internal temperature mechanisms within Qual2k and maintain an instream temperature of 28 C, both the shade % and the cloud cover % were globally set to 65%. Furthermore, Air temperature and Dewpoint temperatures were globally set to 28 C.

Parameter	*Value*	*Unit*	
Photosynthetically Available Radiation	0.47		
Background light extinction	0.2	/m	k_{eb}
Linear chlorophyll light extinction	0.0088	1/m-(ugA/L)	α_p
Nonlinear chlorophyll light extinction	0.054	1/m-(ugA/L)2/3	α_{pn}
ISS light extinction	0.052	1/m-(mgD/L)	α_i
Detritus light extinction	0.174	1/m-(mgD/L)	α_o
Solar shortwave radiation model			
Atmospheric attenuation model for solar	Bras		
Bras solar parameter (used if Bras solar model is selected)			
atmospheric turbidity coefficient (2=clear, 5=smoggy, default=2)	2		n_{fac}
Ryan-Stolzenbach solar parameter (used if Ryan-Stolzenbach solar model is selected)			
atmospheric transmission coefficient (0.70-0.91, default 0.8)	0.8		a_{tc}
Downwelling atmospheric longwave IR radiation			
atmospheric longwave emissivity model	Brunt		
Evaporation and air convection/conduction			
wind speed function for evaporation and air convection/conduction	Brady-Graves-Geyer		
Sediment heat parameters			
Sediment thermal thickness	15	cm	H_s
Sediment thermal diffusivity	0.0064	cm^2/s	α_s
Sediment density	1.6	g/cm^3	ρ_s
Water density	1	g/cm^3	ρ_w
Sediment heat capacity	0.4	cal/(g °C)	C_{ps}
Water heat capacity	1	cal/(g °C)	C_{pw}
Sediment diagenesis model			
Compute SOD and nutrient fluxes	Yes		

Model Output Evaluation:

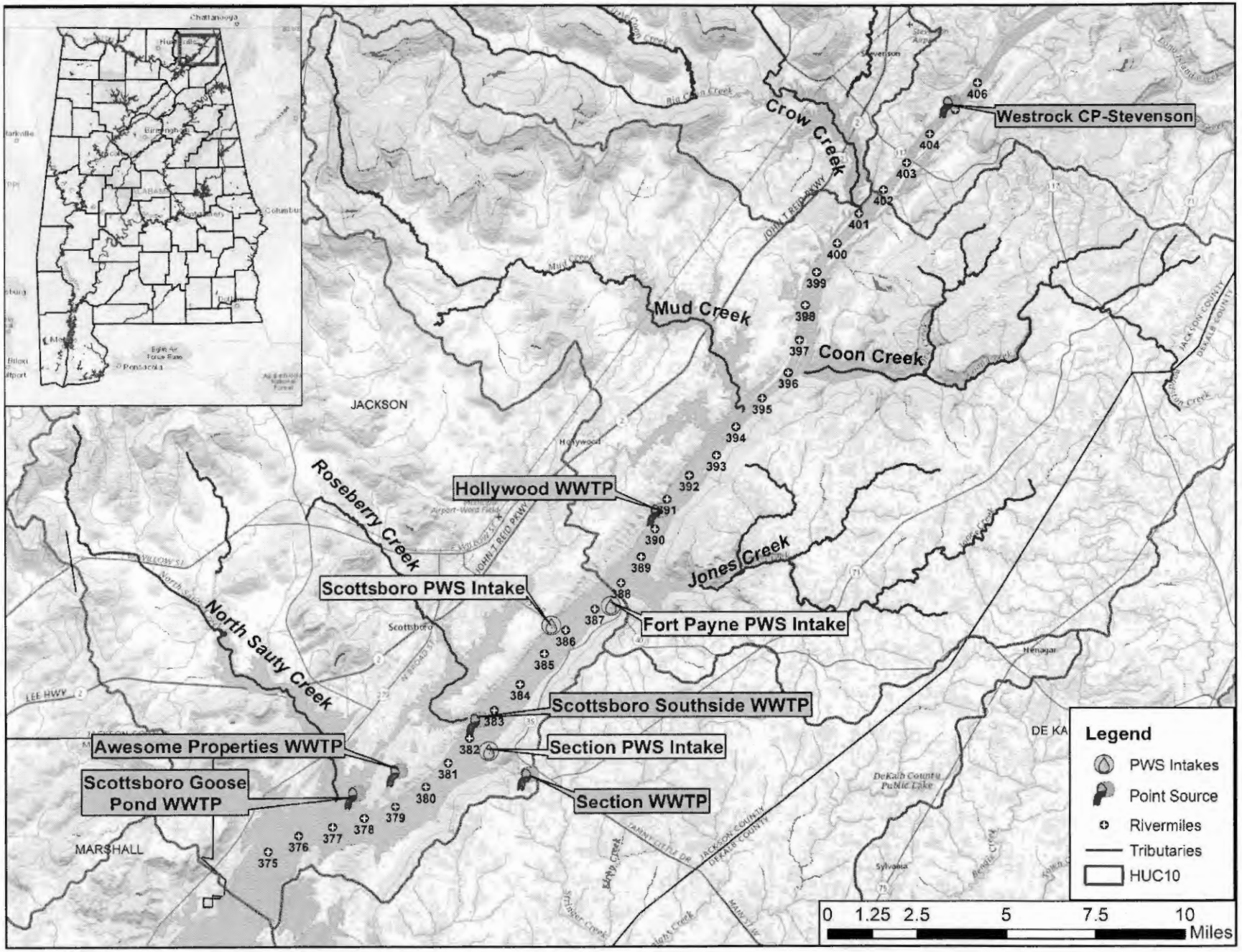
Based on model output results, instream dissolved oxygen concentrations remain above 5.0 mg/l along the entire modeled reach. The predicted minimum dissolved oxygen concentration is 6.00 mg/l, and occurs at the end of the modeled reach. The graph below illustrates the predicted dissolved oxygen concentrations along the modeled reach:



The table below depicts the effluent limitations for Westrock CP- Stevenson that are expected to be protective of water quality. Note the CBOD5 concentration limit of 215.4 mg/l was calculated based on maintaining the categorical based effluent load of 14,461 lbs/day, given the increased effluent flowrate of 8.05 MGD (and F-ratio of 7.5). The Qual2k model predicts that further assimilative capacity is available in the Tennessee River; however, CBOD5 effluent limit inputs for Westrock CP- Stevenson are reflective of their currently permitted categorical guideline values.

Westrock CP - Stevenson NPDES# AL0022314
Qw = 8.05 MGD

Parameter	Effluent Limit
CBOD5 (mg/l):	215.4
Minimum Dissolved Oxygen (mg/l)	0


Westrock CP-Stevenson
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Crow Creek
Mud Creek
Coon Creek
Jones Creek
Roseberry Creek
North Sauty Creek
Hollywood WWTP
Scottsboro PWS Intake
Fort Payne PWS Intake
Scottsboro Southside WWTP
Section PWS Intake
Section WWTP
Awesome Properties WWTP
Scottsboro Goose Pond WWTP
JACKSON
MARSHALL
DE KA
Legend
PWS Intakes
Point Source
Rivermiles
Tributaries
HUC10
0 1.25 2.5 5 7.5 10
Miles

Chavers, Alexander

From: Chavers, Alexander
Sent: Tuesday, November 3, 2020 10:14 AM
To: Angela Aten
Subject: RE: NPDES final comments

Angela,

Just to follow up on our phone call on 11/2/2020 regarding the revised draft, I wanted to recap our conversation and note changes being made to the permit/rationale.

- Monitoring at DSN005 is expected to be moved downstream to a location closer to entry into a water state instead of the upstream at the pond.
- With the location changing, the monitoring frequency of DSN005 will be changed to quarterly and a language will be added to clarify that if DSN005 is inaccessible due to flooding and alternative location can be used (likely the existing location for DSN005).
- Available cyanide limitations will be removed due to no reasonable potential after additional sampling at the new DSN005 location, but monitoring will continue.
- Dissolved arsenic limitations will remain because additional sampling still showed a RP.

I'll add your comments and this response to the draft permit file for the record of changes and a record of our discussion.

Once you have had an opportunity to review, let me know if there are any discrepancies or additional comments, questions or concerns and we can discuss.

Alexander Chavers, P.E.
Env. Eng. Specialist, Sr.
Industrial Section
Industrial/Municipal Branch
(334) 271-7851
ADEM
Alabama Department of Environmental Management

From: Angela Aten <angela.aten@westrock.com>
Sent: Thursday, October 29, 2020 1:01 PM
To: Chavers, Alexander <adchavers@adem.alabama.gov>
Subject: NPDES final comments

Alex,
Attached are the last comments on the dissolved arsenic/free cyanide limits. I am working offsite today & tomorrow, but will get you a wet ink signed copy in fed ex on Monday.
Full test reports can be submitted upon request, however, I have just attached the results pages for your review of the testing at Pump Spring Creek.

Please let me know your thoughts before we go to public comment.

Thanks.
Angela

Angela Aten
Environmental Manager

1611 County Road 85 | Stevenson, AL 35772
T 256.437.3305 | F 256.437.3517
angela.aten@westrock.com | www.westrock.com

Date	Dissolved Arsenic ug/L (ICPMS 200.8)	Free Cyanide ug/L (OIA-1667-09)		
9/14/2020	1.77	Not tested		
9/23/2020	1.44	Not tested		
9/28/2020	1.16	Not tested		
10/14/2020	1.25	ND (<0.000180 mg/L)	0.18	
10/20/2020	1.14	ND (<0.000180 mg/L)	0.18	
	1.352	= Average	0.18	= Average
	0.2620	= Standard Deviation	0.0000	= Standard Deviation

Proposed limit	ug/L
Dissolved Arsenic	4.22
Free Cyanide	22

Figure 1. Evaluation of Performance-Based Reduction of Effluent Monitoring Frequencies
WestRock CP, LLC - Stevenson Mill

	Long Term Average (LTA)	Standard Deviation of LTA	Monthly Permit Limit	LTA/Permit Limit (%)	samples/ month (N)	sqrt(N)	SD/sqrt(N)	CV (%)	normdist (P)	1-P	%(1-P)
Dissolved Arsenic (DSN 005)	1.352	0.262	4.22	32.0	0.3333	0.6	0.34	19.4	1.000000	0.0000	0E+00
Free Cyanide (DSN 005)	0.18	0.01	22.0	0.8	0.3333	0.6	0.01	5.6	1.000000	0.0000	0E+00

$$P(M_N > \mu_1) = P\left(\frac{M_N - \mu}{\frac{\sigma}{\sqrt{N}}} > \frac{\mu_1 - \mu}{\frac{\sigma}{\sqrt{N}}}\right) = 1 - \phi\left(\frac{\mu_1 - \mu}{\frac{\sigma}{\sqrt{N}}}\right),$$

= 1-normdist[(Monthly Limit-LTA)/(SD/SQRT(N))]

Enter the LTA, Standard Deviation, Monthly Permit Limit and desired monthly sampling frequency. (Highlighted)
%1-P is the increased probability of reporting a violation for the desired monitoring frequency.
If %1-P > 1% adjust the monitoring frequency.

Wet Chemistry by Method OIA-1677-09

	Result	Qualifier	Det. Limit	Reference Limit	Dilution	Analysis	Batch	Analyst
Analyte	mg/l		mg/l	mg/l		date / time		
Available Cyanide	ND		0.00200		1	06/05/2020 08:39	WG1487546	JDR
Cyanide,free	0.00200	J6	0.00200		1	06/05/2020 09:40	WG1487610	JDR

Metals (ICPMS) by Method 200.8

	Result	Qualifier	Det. Limit	Reference Limit	Dilution	Analysis	Batch	Analyst
Analyte	mg/l		mg/l	mg/l		date / time		
Arsenic,Dissolved	0.00676		0.000500		1	06/05/2020 13:58	WG1487768	JTM

Metals (ICPMS) by Method 200.8

	Result	Qualifier	MDL	RDL	Reference Limit	Dilution	Analysis	Batch	Analyst
Analyte	mg/l		mg/l	mg/l	mg/l		date / time		
Arsenic,Dissolved	0.00177		0.000195	0.00100		1	10/14/2020 18:25	WG1558359	JPD

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Gl
7 Al
8 Sc

Metals (ICPMS) by Method 200.8

	Result	Qualifier	MDL	RDL	Reference Limit	Dilution	Analysis	Batch	Analyst
Analyte	mg/l		mg/l	mg/l	mg/l		date / time		
Arsenic,Dissolved	0.00144		0.000195	0.00100		1	10/14/2020 18:29	WG1558359	JPD

Metals (ICPMS) by Method 200.8

	Result	Qualifier	MDL	RDL	Reference Limit	Dilution	Analysis	Batch	Analyst
Analyte	mg/l		mg/l	mg/l	mg/l		date / time		
Arsenic,Dissolved	0.00116		0.000195	0.00100		1	10/14/2020 18:32	WG1558359	JPD

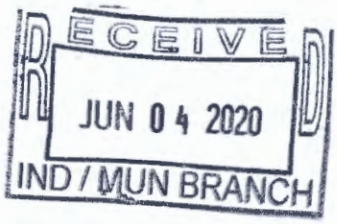
Wet Chemistry by Method OIA-1677-09

	Result	Qualifier	MDL	RDL	Reference Limit	Dilution	Analysis	Batch	Analyst
Analyte	mg/l		mg/l	mg/l	mg/l		date / time		
Cyanide,free	U		0.000180	0.00200		1	10/22/2020 10:01	WG1563559	JDR

Metals (ICPMS) by Method 200.8

	Result	Qualifier	MDL	RDL	Reference Limit	Dilution	Analysis	Batch	Analyst
Analyte	mg/l		mg/l	mg/l	mg/l		date / time		
Arsenic,Dissolved	0.00114		0.000195	0.00100		1	10/22/2020 19:04	WG1563064	JPD

WestRock



June 3, 2020

Scott Ramsey, Chief
Industrial Section – Water Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, Alabama 36110

VIA OVERNIGHT MAIL: 8148 6814 5597

RE: Review Comments for Preliminary Draft NPDES Permit No. AL0022314

Dear Mr. Ramsey:

WestRock CP, LLC's (WestRock's) Stevenson Mill has reviewed the preliminary draft NPDES Permit No. AL0022314 proposed for reissuanee. WestRoek has prepared the following review comments and proposed corrections for your consideration:

- Part I.A. (Page 1 of 34) – WestRock requests that ammonia-nitrogen monitoring be changed from "monthly" to "monthly during the seasonal period of April-October" as is required in the current permit. The NPDES permit application showed a long-term average ammonia-nitrogen of 0.33 mg/L for the 2016-2018 monitoring period. Since April 2019, the ammonia-nitrogen in DSN 001 has been below detection limits in six of the nine monitoring periods, with the maximum reported concentration at 0.123 mg/L. Because ammonia-nitrogen is rarely detected, Westrock requests seasonal monitoring for this pollutant.
- Part I.A. (Page 2 of 34) – The seasonal reporting period needs to be changed from "June – October" to "June – September" to agree with Part IV.E.2 of the draft permit.
- Part I.A. (Page 2 of 34) – Footnote 4 needs to be corrected to Part IV.E.6 rather than Part IV.F.6.
- Part I.A. (Page 3 of 34) – Page 3 of 34 needs to be deleted in its entirety. Pursuant to 40 CFR 430.03(a), requirements for BMP plans for spent pulping liquor, soap, and turpentine apply only to facilities subject to Subparts B and E of 40 CFR Part 430. The Stevenson Mill is subject only to Subparts F and J of 40 CFR Part 430.

- Part I.A. (Page 7 of 34) – Please change the pollutant "Cyanide, Free Available" to "Cyanide, Free". WestRock has consulted with its contract analytical laboratory, and there are two separate analytical methods for "Free Cyanide" and "Available Cyanide." Free Cyanide is the species that is toxic to aquatic life.
- Part I.A. (Page 7 of 34) – WestRock is requesting a quarterly monitoring frequency for DSN 005 rather than a monthly monitoring frequency.
- Part I.A. (Page 8 of 34) – WestRock is requesting that a footnote be added to state that that no monitoring is required for DSN 006 or DSN 025. The water quality of DSN 023 is representative of the water quality for DSN 006 and DSN 025.
- Part I.A. (Page 9 of 34) – WestRock is requesting a semi-annual monitoring frequency for DSN 023A rather than a monthly monitoring frequency. Monitoring performed in accordance with Permit ALG141038 has indicated that there have been no significant concentrations of pollutants in the discharge from DSN 023A.
- Part I.A. (Page 10 of 34) – WestRock is requesting a semi-annual monitoring frequency for DSN 0241 rather than a monthly monitoring frequency. Monitoring performed in accordance with Permit ALG060506 has indicated that there have been no significant concentrations of pollutants in the discharge from DSN 0241.
- Part I.A. (Page 10 of 34) – WestRock is requesting that flow monitoring be removed from this outfall because flow monitoring is not required by Permit ALG060506. Upon reissuance of the NPDES individual permit, WestRock plans to terminate Permit ALG060506. WestRock is also requesting that a footnote be added for this page that indicates that monitoring is required "only when the pond overflows" similar to the requirements of existing Permit ALG060506.
- Part II.A.1 (Page 17 of 34) – Please correct the spelling of "auxiliary" in the last sentence.
- Part II.A.2.a (Page 17 of 34) – Please correct the spelling of "dilution" near the end of the sentence.
- Part IV.D.1.a(1) (Page 29 of 34) – WestRock requests that ADEM reconsider the proposed instream waste concentration of 16.0%. The instream waste concentration in the current permit is 3.0%. WestRock's permit application indicates that the long-term average discharge flow for DSN 001 is 7.37 million gallons per day (or 11.4 cubic feet per second). According to the draft ADEM permit rationale, the 1Q10 flow for the Tennessee River is 4,289 cubic feet per second, and the 7Q10 flow is 5,719 cubic feet per second. With the facility's discharge flow representing less than 0.5% of the total flow, an instream waste concentration of 16.0% seems excessive.
- Part IV.E.2 (Page 33 of 34) – WestRock requests that ADEM reduce the period required for stream monitoring from June 1 to September 30 to July 1 to September 30. Previous historical monitoring data collected by the Stevenson Mill and reported to ADEM indicates that, since June 2016 when the Tennessee

Valley Authority shut down the Widows Creek Plant, only one sample collected prior to July 1 was below 6.0 mg/L dissolved oxygen at Tennessee River Mile 405.7 during the month of June.

- Part IV.F.1 (Page 33 of 34) – Field 27 is listed twice and Field 28 has been omitted from this condition. Please replace the second listing of Field 27 with Field 28.

WestRock's Stevenson Mill respeetively requests that ADEM consider the aforementioned comments and recommendations to the draft re-issuance of NPDES Permit No. AL0022314. WestRock is also enclosing with this letter an updated list of proposed biocides and corrosion inhibitors (ADEM Form 187 Item C.6). If you have any questions or need additional information concerning these comments, please contact me at (256) 437-3305.

Sincerely,

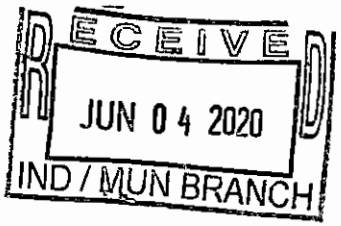
WestRock CP, LLC – Stevenson Mill

Angela Aten
Lead Environmental Engineer

C: File II.101

Attachment to Form 187 Item C.6 – Biocides and Corrosion Inhibitors Used by WestRock CP, LLC's Stevenson Mill NPDES Permit No. AL0022314

Product Name	Product Type	96-Hour Median Tolerance Limit	Quantity to Be Used	Frequency of Use	Proposed Discharge Concentration	EPA Registration Number
NALCO C-9 (Phosphoric Acid, Zinc Chloride)	Corrosion Inhibitor	3.1 mg/L	193 lbs/day	Continuous	3.1 mg/L	Not Registered
NALCO 7330 (Magnesium Nitrate, 5-Chloro-2-Methyl-4-Isothiazolin-3-one, 2-Methyl-4-Isothiazolin-3-one)	Biocide	7.5 mg/L	0 lbs/day	Not Used	N/A	1706-153
NALCO 3DT487 (Phosphoric Acid)	Corrosion Inhibitor	3,600 mg/L	19 lbs/day	Continuous	0.31 mg/L	Not Registered
NALCO PURATE (Sodium Chlorate and Hydrogen Peroxide)	Biocide	>1000 mg/L (Sodium chlorate)	336 lbs/day	Continuous	5.5 mg/L	1706-242
NALCO 1318 (Sodium Bromide)	Biocide	5,000 mg/L	27 lbs/day	Intermittent	0.44 mg/L	83451-18-1706
NALCON 7647 (Magnesium Nitrate, 5-Chloro-2-Methyl-4-Isothiazolin-3-one, 2-Methyl-4-Isothiazolin-3-one)	Biocide	12.5 mg/L	0 lbs/day	Not Used	N/A	1706-158
Sodium Hypochlorite (Sodium Hypochlorite, Sodium Hydroxide)	Biocide	0.038-0.065 mg/L	829 lbs/day	Continuous	<0.05 mg/L	266-20001



Chavers, Alexander

From: Angela Aten <angela.aten@westrock.com>
Sent: Monday, July 6, 2020 9:14 AM
To: Chavers, Alexander
Subject: RE: Westrock Stevenson Draft Permit Response

Alex,
Let us review and we may have more questions.
Thanks.
Angela

From: Chavers, Alexander <adchavers@adem.alabama.gov>
Sent: Thursday, July 02, 2020 1:15 PM
To: Angela Aten <angela.aten@westrock.com>
Subject: Westrock Stevenson Draft Permit Response

Angela,

I have had the opportunity to review the comments received on the draft permit and have the following responses:

- Ammonia monitoring specifically is being required year-round to gather data on contributing sources. Sections of the Tennessee River, both upstream and downstream, are already considered impaired for Nutrients and it is prudent to collect additional data for possible future listings or limitations. Other permits have already started including this requirement.
- Part I.A (Page 2 of 34) was corrected to show the River Monitoring Certification period to be June to September and Footnote 4/ was corrected.
- Page 3 of 34 was removed since the facility is not subject to the Spent Pulpling Liquor BMP requirements.
- The pollutant "Cyanide, Free Available" is the parameter listing in ICIS. While it could be changed superficially in the permit, all electronic systems will continue to show "Cyanide, Free Available". I have added a footnote to further specify the method(s) that must be used when analyzing this parameter.
- The monitoring frequency of monthly for DSN0051 is appropriate for the type of discharge. A quarterly frequency provides the opportunity to sample around the critical parts of year when non-stormwater contributions (e.g. landfill leachate) have the most impact. A monthly frequency captures these periods and is not overly burdensome. This fact is true for DSN023A and DSN0241.
- Added footnote to require monitoring at DSN022 and DSN023, the previously representative outfalls.
- Monthly Monitoring will remain for DSN023A. This frequency is consistent with the frequency required by ALG140000 and is therefore consistent with similar permits performing similar activities.
- Monthly Monitoring will remain for DSN0241. The requirements here are consistent with outfall 002 of ALG060000 for a discharge of process wet decking water and is therefore consistent with similar permits performing similar activities.
- Flow monitoring will remain for outfall DSN0241. Flow monitoring is standard for any outfall (stormwater or otherwise) and important to determine overall loadings. The *estimate* sample type should allow the facility flexibility in determining the best way to gather that information. There is no need to include a footnote specifying "only when the pond overflows" as monitoring is not required if a discharge to a water of the state does not occur, as per regulation.

- Part II.A.1/2.a – These words appear to be spelled correctly in the Word version. It appears the scanned version you receive, read the u's as n's and misprinted them.
- Corrected the Land Application Requirements to include Field 28 and remove duplicate Field 27.

The following issues are water quality determined and will need to be reviewed in order to be revised (if they see fit):

- Westrock requests the IWC be reduce from 16.0%.
- Reduce the river monitoring period from June to September, inclusive to July to September, inclusive.

I have forwarded the last 2 items to water quality to have a look at. Please have a look through these comments and let me know if you would like to discuss. Thanks and have a safe weekend!

Alexander Chavers, P.E.
Env. Eng. Specialist, Sr.
Industrial Section
Industrial/Municipal Branch
(334) 271-7851

ADEM
Alabama Department of Environmental Management

Chavers, Alexander

From: Mooney, James J
Sent: Monday, September 14, 2020 2:41 PM
To: Chavers, Alexander
Subject: RE: Westrock Stevenson (AL0022314)
Attachments: 060300010205 AL0022314 MZ 10-11-2019 WET TRB JES TENNESSEE RIVER (GUNTERSVILLE LK)-WESTROCK CP STEVENSON.pdf

Alex,

In regards to Westrock Stevenson's two comments:

- Re-evaluate the IWC of 16.0% that we determined using the CORMIX.
  - I would just provide them with the mixing zone response package that is attached. The rationale outlines our approach and it is pretty straight forward. If they have any follow up questions after reviewing the mixing zone package then we can discuss.

- Reduce the river monitoring requirements from June to September, inclusive to July to September, inclusive.
  - I drafted a response to heir comment: "The Department has evaluated the available instream water quality data provided by WestRock Stevenson in addition to data collected by the Department. Based on this evaluation, the Water Quality Branch recommends retaining the proposed monitoring period of June – September. The available instream data demonstrates that beginning in the month of June, instream ambient water temperatures in the Tennessee River (Lake Guntersville) begin to sharply increase. Therefore, beginning the monitoring period in the month of June, when the ambient water temperature begins to rise and the oxygen solubility decreases, is recommended to demonstrate that the Westrock Stevenson discharge is not adversely affecting instream dissolved oxygen concentrations."

From: Chavers, Alexander <adchavers@adem.alabama.gov>
Sent: Friday, September 11, 2020 8:51 AM
To: Mooney, James J <jjmooney@adem.alabama.gov>
Subject: RE: Westrock Stevenson (AL0022314)

No worries. Thanks for taking a look at it.

From: Mooney, James J <jjmooney@adem.alabama.gov>
Sent: Friday, September 11, 2020 8:51 AM
To: Chavers, Alexander <adchavers@adem.alabama.gov>
Subject: Re: Westrock Stevenson (AL0022314)

Sorry, I let your first email slip through the cracks. I'm out in the field today,but ill follow up on this with you next week.

From: Chavers, Alexander <adchavers@adem.alabama.gov>
Sent: Friday, September 11, 2020 8:42:00 AM
To: Mooney, James J <jjmooney@adem.alabama.gov>
Subject: Westrock Stevenson (AL0022314)

WestRock

1611 County Road 85
Stevenson, AL 35772

office: 256.437.3305
www.westrock.com

July 1, 2019

Mr. Alex Chavers
Industrial Section – Water Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

Via Overnight Mail: 8103 1391 3028

RE: Renewal Application for NPDES Permit No. AL0022314
WestRock CP, LLC – Stevenson, Alabama
MZA WLA Fees request response

Dear Mr. Chavers:

WestRock CP, LLC's (WestRock's) Stevenson Mill has applied for renewal of NPDES Permit No. AL0022314 issued by the Alabama Department of Environmental Management (ADEM).

Pursuant to the fees request dated June 14, 2019, enclosed please find the following:

- Check #16183095 in the amount of $9710.00
- Completed ADEM Form 455
- Various drawings of the effluent pipe location, length, and configuration in the Tennessee River
- Google map indicating location of effluent and intake structure locations

If you have any questions or need additional information concerning these comments, please contact me via email at angela.aten@westrock.com or by phone at (256) 437-3305.

Sincerely,

Angela Aten
Environmental Engineer

cc: Stephen Stroud
File II. 101.1

REQUIRED INFORMATION FOR MIXING ZONE MODELING

GENERAL INFORMATION

1. Applicant Name: WestRock CP, LLC
2. Permit No.: AL0022314
3. Project Name (if different from applicant): NPDES Permit Renewal
4. Contact name and phone number: Angela Aten 256-437-3305
5. Date submitted: 6/12/2019
5. Facility type (new, existing or upgrade): Existing

AMBIENT CONDITIONS

1. Receiving waterbody: Tennessee River
2. Width of waterbody at discharge point (m): approx. 437 m
3. Depth of waterbody at discharge point (m): 5.8 m
4. Average depth of waterbody at discharge point (m): 5.97 m

DISCHARGE TYPE:

Submerged endpipe or submerged multiport diffuser? Submerged Multiport Diffuser

Effluent Density (kg/m^3): 1019.35 kg/m3

Note: Fill out box A below for endpipe discharges; box B for diffuser discharges.

A. DISCHARGE CONDITIONS FOR SUBMERGED ENDPIPE DISCHARGES

1. Nearest bank (right or left) to the outfall looking downstream:
2. Distance from nearest bank to discharge (m):
3. Endpipe diameter (m): 4. Contraction ratio (if known):
5. Height of discharge above stream bottom (m):
6. Effluent flow rate (mgd):

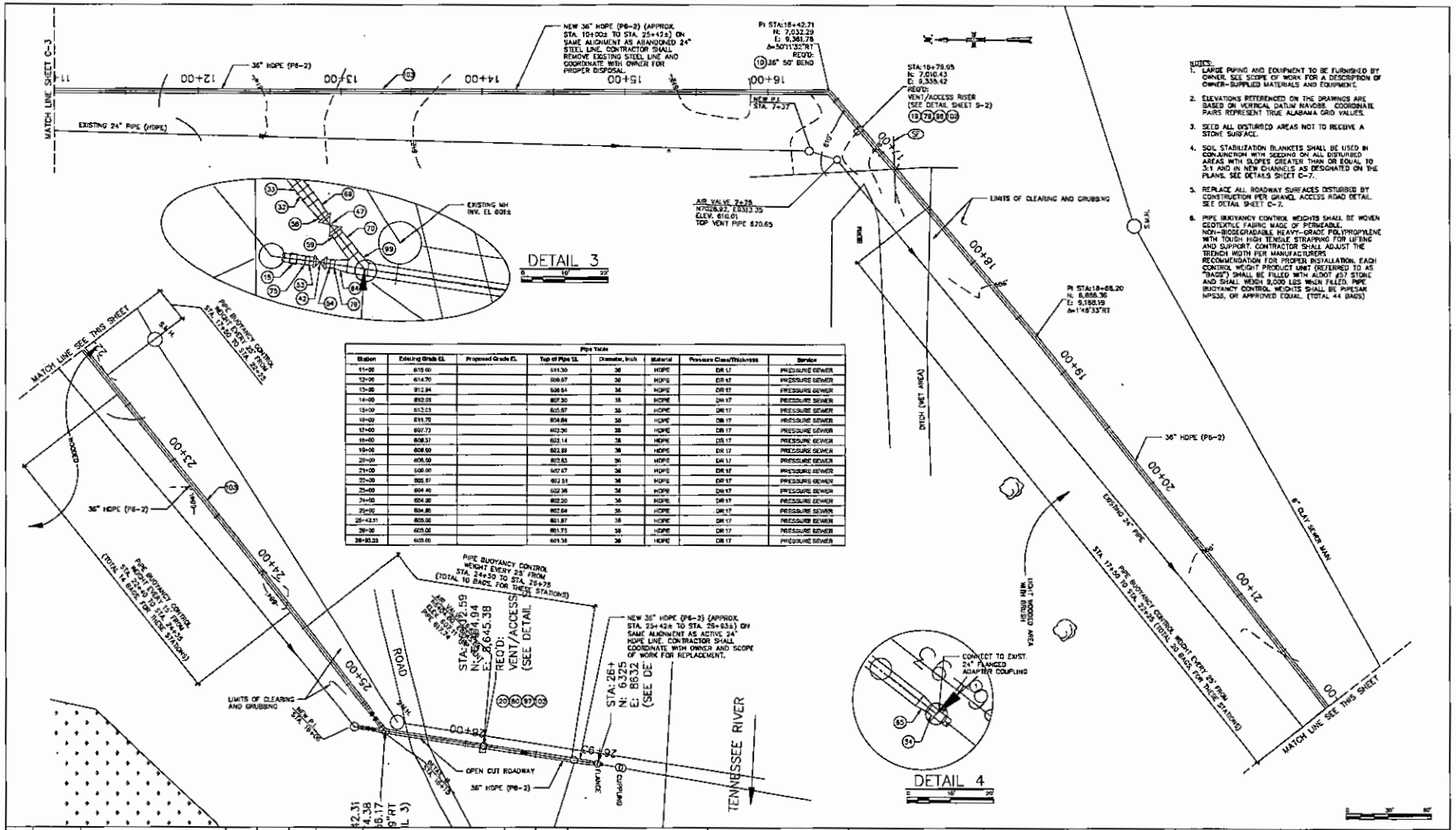
B. DISCHARGE CONDITIONS FOR SUBMERGED MULTIPORT DIFFUSERS

NOTE:
Diffuser length is defined as the distance between the first and last diffuser ports.

1. Diffuser length (m): 54.86 m
2. Nearest bank (right or left) to the outfall looking downstream: 183 m
3. Distance from nearest bank to first diffuser port (m): 101 m
4. Total number of ports: 12 5. Diameter of a single port (m): 0.15 m
6. Distance between adjacent ports (i.e., port spacing, m): 7.62 m
7. Height of ports above stream bottom (m): 1.83 m
8. Port contraction ratio (if known):
9. Diameter of diffuser manifold (m): 0.61
10. Effluent flow rate (mgd): 10.9 mgd maximum (Average 8.0 mgd)

SPECIAL REQUIREMENTS

1. Please submit a map displaying the outfall location along with the appropriate latitude/longitude coordinates.
2. Please submit the appropriate engineering plans that depict the outfall configuration.



Pipe Table

Station	Existing Grade El.	Proposed Grade El.	Top of Pipe El.	Diameter, Inch	Material	Pressure Class/Thickness	Service
11+00	615.00		611.30	36	HDPE	DR 17	PRESSURE SEWER
12+00	614.70		609.67	36	HDPE	DR 17	PRESSURE SEWER
13+00	612.84		608.54	36	HDPE	DR 17	PRESSURE SEWER
14+00	613.05		607.30	36	HDPE	DR 17	PRESSURE SEWER
15+00	612.03		605.97	36	HDPE	DR 17	PRESSURE SEWER
16+00	611.75		604.84	36	HDPE	DR 17	PRESSURE SEWER
17+00	607.73		603.30	36	HDPE	DR 17	PRESSURE SEWER
18+00	608.37		603.14	36	HDPE	DR 17	PRESSURE SEWER
19+00	608.00		602.89	36	HDPE	DR 17	PRESSURE SEWER
20+00	606.00		602.53	36	HDPE	DR 17	PRESSURE SEWER
21+00	608.00		602.17	36	HDPE	DR 17	PRESSURE SEWER
22+00	605.97		601.91	36	HDPE	DR 17	PRESSURE SEWER
23+00	604.40		602.36	36	HDPE	DR 17	PRESSURE SEWER
24+00	604.00		602.20	36	HDPE	DR 17	PRESSURE SEWER
25+00	604.00		602.04	36	HDPE	DR 17	PRESSURE SEWER
25+42.31	605.00		601.97	36	HDPE	DR 17	PRESSURE SEWER
26+00	605.00		601.75	36	HDPE	DR 17	PRESSURE SEWER
26+83.33	605.00		601.38	36	HDPE	DR 17	PRESSURE SEWER

NOTES:
1. LARGE PIPING AND EQUIPMENT TO BE FURNISHED BY OWNER. SEE SCOPE OF WORK FOR A DESCRIPTION OF OWNER-SUPPLIED MATERIALS AND EQUIPMENT.
2. ELEVATIONS REFERENCED ON THE DRAWINGS ARE BASED ON VERTICAL DATUM NAVD88. COORDINATE PAIRS REPRESENT TRUE ALABAMA GRID VALUES.
3. SEED ALL DISTURBED AREAS NOT TO RECEIVE A STONE SURFACE.
4. SOIL STABILIZATION BLANKETS SHALL BE USED IN CONJUNCTION WITH SEEDING ON ALL DISTURBED AREAS WITH SLOPES GREATER THAN OR EQUAL TO 3:1 AND IN NEW CHANNELS AS DESIGNATED ON THE PLANS. SEE DETAILS SHEET C-7.
5. REPLACE ALL ROADWAY SURFACES DISTURBED BY CONSTRUCTION PER GRAVEL ACCESS ROAD DETAIL. SEE DETAIL SHEET C-7.
6. PIPE BUOYANCY CONTROL WEIGHTS SHALL BE WOVEN GEOTEXTILE FABRIC MADE OF PERMEABLE, NON-BIODEGRADABLE HEAVY-GRADE POLYPROPYLENE WITH TOUGH HIGH TENSILE STRAPPING FOR LIFTING AND SUPPORT. CONTRACTOR SHALL ADJUST THE TRENCH WIDTH PER MANUFACTURER'S RECOMMENDATION FOR PROPER INSTALLATION. EACH CONTROL WEIGHT PRODUCT UNIT (REFERRED TO AS "BAGS") SHALL BE FILLED WITH ALDOT #57 STONE AND SHALL WEIGH 9,000 LBS WHEN FILLED. PIPE BUOYANCY CONTROL WEIGHTS SHALL BE PIPESAK NPS36, OR APPROVED EQUAL. (TOTAL 44 BAGS)

REV.	DATE	DESCRIPTION	BY:	APVD
0	SEPT 2013	RELEASED FOR CONSTRUCTION – CP 6	VET	

ARCADIS

SCALE: AS SHOWN	
PROJECT NO.: 450814291	
DRAWN BY: Y. TAYLOR	SEPT 2013
ENG'D. BY: S. CROWE	SEPT 2013
CHECKED BY: D. MCKAY	SEPT 2013
APPROVED BY:	
APPROVED BY:	
APPROVED BY:	
ENGINEERING	DATE

RockTenn

STEVENSON MILL WWTP UPGRADE
STEVENSON, ALABAMA

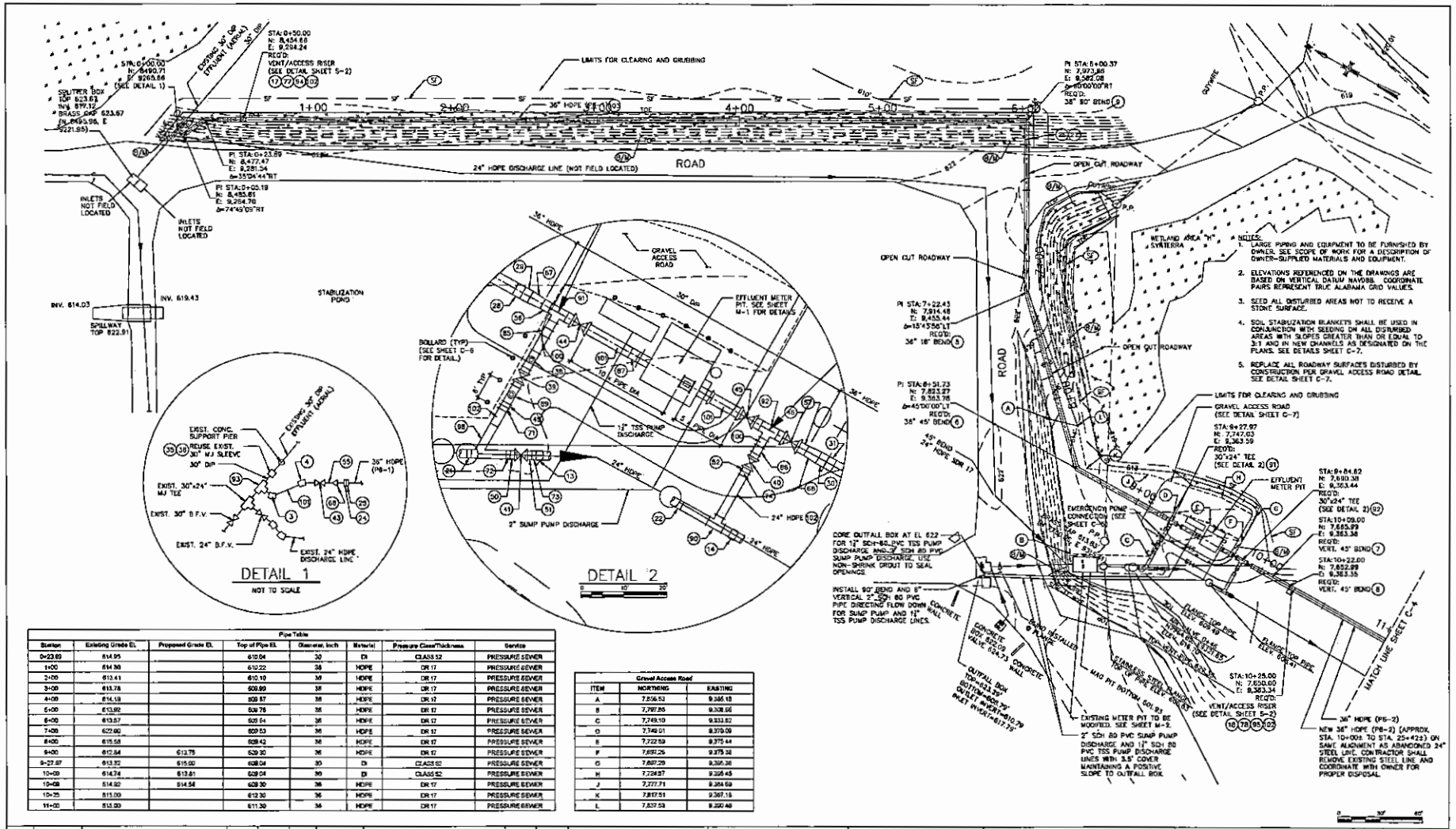
FLN-EQUIP NO.:

DRAWING TITLE:
EFFLUENT OUTFALL PLAN
SHEET 2 OF 2

DRAWING NO.: 11-32-0110

SHEET: C-4

REV.: 0



Pipe Table							
Station	Existing Grade El.	Proposed Grade El.	Top of Pipe El.	Diameter, Inch	Material	Pressure Class/Thickness	Service
0+23.69	614.95		610.04	30	DI	CLASS 52	PRESSURE SEWER
1+00	614.36		610.22	36	HDPE	DR 17	PRESSURE SEWER
2+00	613.41		610.19	36	HDPE	DR 17	PRESSURE SEWER
3+00	613.78		609.99	36	HDPE	DR 17	PRESSURE SEWER
4+00	614.18		609.97	36	HDPE	DR 17	PRESSURE SEWER
5+00	613.92		609.76	36	HDPE	DR 17	PRESSURE SEWER
6+00	613.67		609.64	36	HDPE	DR 17	PRESSURE SEWER
7+00	622.60		609.53	36	HDPE	DR 17	PRESSURE SEWER
8+00	615.58		609.42	36	HDPE	DR 17	PRESSURE SEWER
9+00	612.84	612.75	609.30	36	HDPE	DR 17	PRESSURE SEWER
9+27.97	613.92	615.00	608.04	30	DI	CLASS 52	PRESSURE SEWER
10+09	614.74	613.81	609.04	30	DI	CLASS 52	PRESSURE SEWER
10+08	614.82	614.54	609.30	36	HDPE	DR 17	PRESSURE SEWER
10+35	615.00		612.30	36	HDPE	DR 17	PRESSURE SEWER
11+00	615.00		611.30	36	HDPE	DR 17	PRESSURE SEWER

Gravel Access Road		
ITEM	NORTHING	EASTING
A	7,836.53	9,246.18
B	7,797.85	9,308.06
C	7,749.10	9,333.82
D	7,749.01	9,370.09
E	7,722.59	9,375.44
F	7,697.26	9,375.38
G	7,697.29	9,396.36
H	7,724.57	9,396.45
J	7,777.71	9,364.69
K	7,817.51	9,367.15
L	7,837.53	9,350.48

REV.	DATE	DESCRIPTION	BY:	APVD	REV.	DATE	DESCRIPTION	BY:	APVD
					1	SEPT 2013	RELEASED FOR CONSTRUCTION - CP 6	VET	

ARCADIS

SCALE: AS SHOWN	
PROJECT NO.: 450814291	
DRAWN BY: V. TAYLOR	SEPT 2013
ENG'D. BY: S. CROWE	SEPT 2013
CHECKED BY: D. MCKAY	SEPT 2013
APPROVED BY:	
APPROVED BY:	
APPROVED BY:	
ENGINEERING	DATE

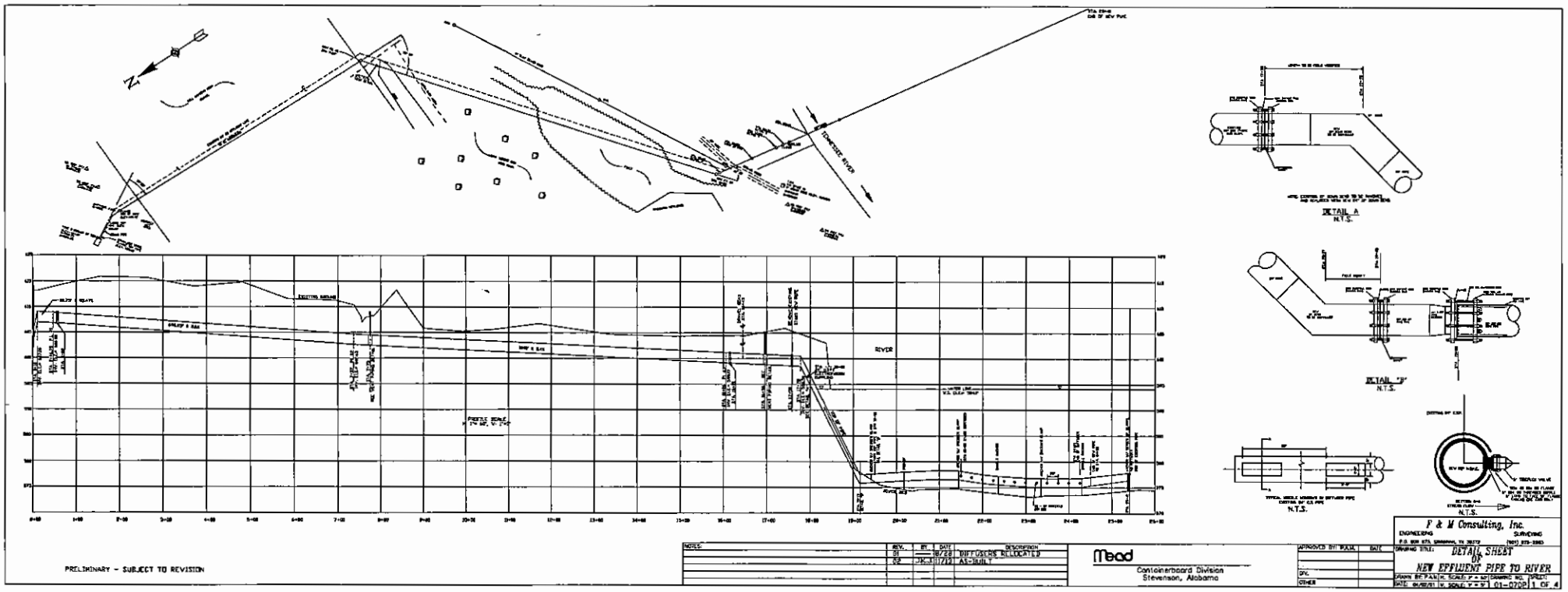
RockTenn

STEVENSON MILL WWTP UPGRADE
STEVENSON, ALABAMA

FLN/EQUIP. NO.:

DRAWING TITLE:
EFFLUENT OUTFALL PLAN
SHEET 1 OF 2

DRAWING NO.: 11-32-0109 | SHEET: C-3 | REV.: 0



PRELIMINARY - SUBJECT TO REVISION

NOTES:	REV.	BY	DATE	DESCRIPTION
	R1		10/22	DIFFUSERS RELOCATED
	R2	JPK	3/07/23	AS-BUILT

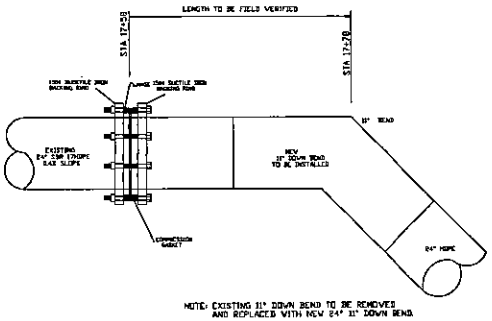
Mead
Containerboard Division
Stevenson, Alabama

APPROVED BY: PLANT	DATE
ENV.	
OTHER	

F & M Consulting, Inc.
ENGINEERING SURVEYING
P.O. BOX 870, SAVANNAH, TN 38372 (901) 925-3983

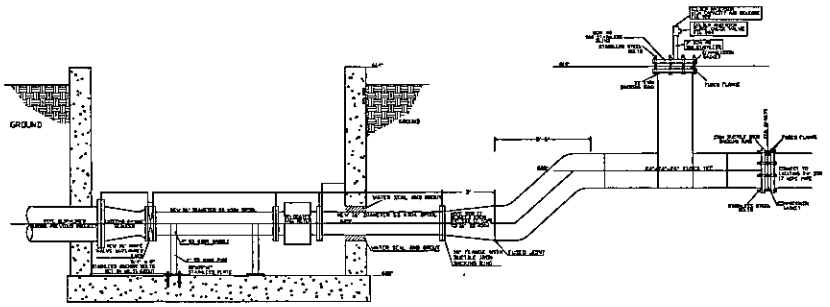
DRAWING TITLE: DETAIL SHEET OF NEW EFFLUENT PIPE TO RIVER

DRAWN BY: PAN/K SCALE: 1" = 50' DRAWING NO. PROJECT
DATE: 04/05/01 H. SCALE: 1" = 5' 01-0702 1 OF 4



NOTE: EXISTING 11° DOWN BEND TO BE REMOVED AND REPLACED WITH NEW 24" 11° DOWN BEND.

DETAIL "A"
N.T.S.



DETAIL "D"
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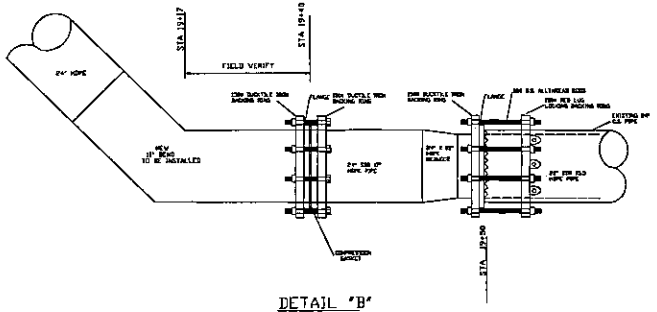
SEE DWG. PIPE 2



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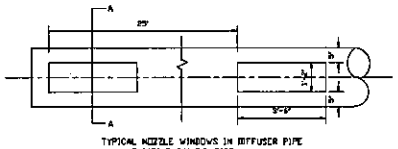
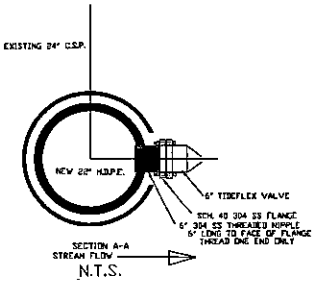


TYPICAL NOZZLE WINDOWS IN DIFFUSER PIPE EXISTING 24" C.S. PIPE
N.T.S.



N.T.S.

NOTES:	REV.	BY	DATE	DESCRIPTION
	01	J.K.J.	11/19	AS-BUILT

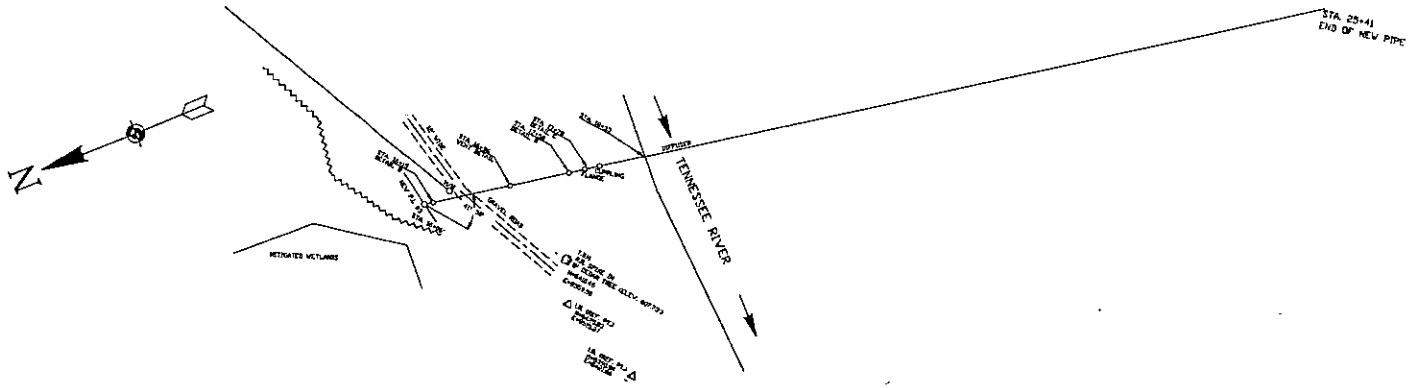
Mead
Containerboard Division
Stevenson, Alabama

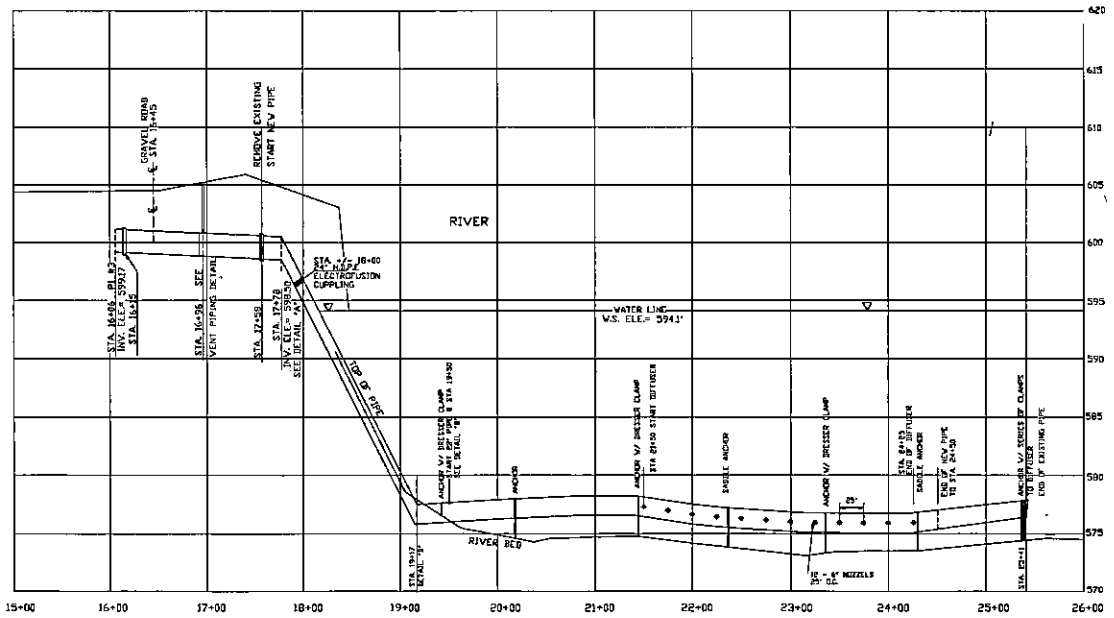
DRAWN BY: P.A.M.	DATE
DES.	
OTHER	

F & M Consulting, Inc.
ENGINEERING SURVEYING
P.O. BOX 873, SAVANNAH, TN 38372 (731) 925-2983

DRAWING TITLE: DETAIL SHEET FOR NEW EFFLUENT PIPE TO RIVER

DRAWN BY: P.A.M.	SCALE: N.T.S.	DRAWING NO.: 11-32-034	SHEET: 3 OF 3
DATE: 11/15/01			





NOTES:	REV.	BY	DATE	DESCRIPTION

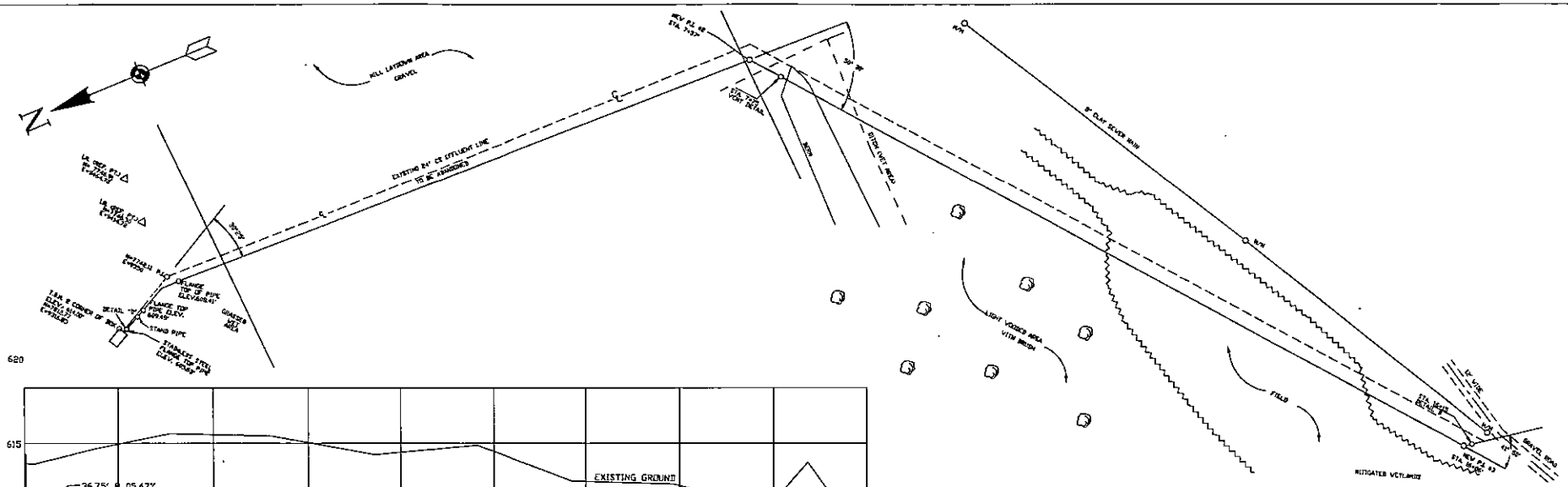
Mead
Containerboard Division
Stevenson, Alabama

APPROVED BY: P.A.M. DATE

F & M Consulting, Inc.
ENGINEERING SURVEYING
P.O. BOX 873, SAVANNAH, TN 38372 (731) 925-2883

DRAWING TITLE:
PLAN AND PROFILE
NEW EFFLUENT PIPE TO RIVER

DRAWN BY: J.K.J. DATE: 11/14/01
SCALE: HORZ: 1"=80' VERT: 1"=5'
DRAWING NO. 11-32-033
SHEET 2 OF 3



NOTES:	REV.	BY	DATE	DESCRIPTION
	01	J.K.J.	11/01	AS-BUILT

Mead
Containerboard Division
Stevenson, Alabama

APPROVED BY: P.A.M.	DATE
DIV.	
OTHER	

DRAWING TITLE: *PLAN AND PROFILE NEW EFFLUENT PIPE TO RIVER*

DRAWN BY: J.K.J. | H. SCALE: 1" = 60' | DRAWING NO. 11-32-032 | SHEET: 1 OF 3

DATE: 11/15/01 | V. SCALE: 1" = 5'

F & M Consulting, Inc.
ENGINEERING (731) 925-2983 SURVEYING
P.O. BOX 873, SAVANNAH, TN 38372

Form 2F Site Drainage Map – WestRock CP, LLC

Stevenson Mill – NPDES Permit No. AL0022314

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

JUN 14 2019

MR DARRELL DAUBERT
GENERAL MANAGER
WESTROCK CP - STEVENSON
P.O. BOX 508
STEVENSON AL 35772

RE: WATER NPDES INDUSTRIAL MAJOR FEE
NPDES PERMIT AL0022314
JACKSON COUNTY

Dear Mr. Daubert:

Pursuant to the Alabama Department of Environmental Management Administrative Code 335-1-6, the Department is authorized to collect application fees. The amended application fees became effective February 4, 2016.

The fee for processing your application is $28,715.00. Your application included a payment of $19,005.00, which included the fee for renewal of a Major NPDES Industrial Discharge Permit and the fee for Biomonitoring and Toxicity Limits. Before processing can begin the Department must be in receipt of the $9,710.00 balance, which includes the fee for an updated waste load allocation and mixing zone analysis. All fees should be made payable to the Alabama Department of Environmental Management and sent to the attention of Alex Chavers, Water Division, Alabama Department of Environmental Management, PO Box 301463, Montgomery, Alabama 36130-1463. All fees paid pursuant to the regulation requirements are non-refundable.

Should you have any questions or comments concerning this report, please feel free to contact Alex Chavers by phone at **(334) 271-7851** or by e-mail at **adchavers@adem.alabama.gov**.

Sincerely,

Alex Chavers
Industrial Section
Water Division

FILE: FEEL/0000008235

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

NPDES PERMIT RENEWAL APPLICATION

Prepared for:

WESTROCK CP, LLC – STEVENSON MILL
1611 COUNTY ROAD 85
STEVENSON, ALABAMA 35772

February 2019

Prepared by:

Angela Aten
WestRock CP, LLC
P. O. Box 508
Stevenson, AL 35772
(256) 437-3305

Table of Contents

Section 1. Introduction

WestRock CP, LLC owns and operates an unbleached semi-chemical pulp and paperboard mill in Stevenson, Alabama. The facility discharges treated process wastewater, cooling water, landfill leachate, and storm water runoff to the Tennessee River through Outfall DSN001 under National Pollutant Discharge Elimination System (NPDES) Permit AL0022314 issued by the Alabama Department of Environmental Management (ADEM). The facility also discharges treated sanitary wastewater from Outfall DSN 002 to the Tennessee River, and storm water runoff associated with industrial activity through outfalls DSN 005, DSN 006, DSN 0022, and DSN 023 to unnamed tributaries to the Tennessee River.

Two discharge outfalls are currently permitted by ADEM General Permit ALG060506, which became effective on July 1, 2017. Outfall 002-1 contains settled storm water from the Wet Yard settling pond, and Outfall 001-1 consists of storm water runoff from the area west of the Wet Yard. WestRock is proposing to add DSN 024 and DSN 025 to the individual NPDES permit to replace the outfalls covered by ADEM General Permit ALG060506. These two outfalls discharge to unnamed tributaries to Bengis Creek.

ADEM General Permit ALG141308 authorizes discharges associated with rail car exterior washing operations that do not use solvents. Because this discharge flows through existing storm water outfall DSN 023, WestRock is proposing to incorporate this activity into the individual NPDES permit.

The Stevenson Mill operates two paper machines. The No. 1 and No. 2 Paper Machines produce corrugating medium from semi-chemical and secondary fiber. The facility is subject to the point source category effluent limitation guidelines for Semi-Chemical Pulp and Paper – Sodium Base Mills (as promulgated in 40 CFR Part 430 Subpart F) and Secondary Fiber Non-Deink – Corrugating Medium (as promulgated in 40 CFR Part 430 Subpart J).

This document includes the following state and federal application forms for renewal of the NPDES permit:

- EPA Form 1 – General Information
- EPA Form 2C – Application for Permit to Discharge Wastewater – Existing Manufacturing, Commercial, Mining and Silvicultural Operations (DSN 001, DSN 002, and DSN 005)
- EPA Form 2F – Application for Permit to Discharge Storm Water (DSN 006, DSN 022, DSN 023, DSN 024, and DSN 025)
- ADEM Form 187 – NPDES Permit Application Supplementary Information

Section 2. Proposed Permit

2.1 Production Rates

Categorical limits for the Stevenson Mill have been developed using the average daily production rates for corrugating medium recorded for the period of January 2017 through December 2017. This period represents the highest annual average daily production rate in the most recent five-year period. The highest monthly average daily production rate in the past 12 months occurred in September 2018. Table 1 summarizes the daily average production rates for the month of September 2018 and the January 2017-December 2017 operating period.

Table 1 – Paper Machine Production
WestRock CP, LLC – Stevenson, Alabama

Machine Furnish	2017 Daily Production (Air-Dry Tons/Day)	September 2018 Production (Air-Dry Tons/Day)
Semi-Chemical Pulp	1,449.65	1,265.74
Recycle Pulp	1,148.76	1,139.23
Total Machine Production	2,598.41	2,404.97

2.2 Development of Effluent Limits for DSN 001

WestRock CP, LLC's Stevenson Mill is subject to the Effluent Limitation Guidelines and Standards for the Pulp, Paper and Paperboard Point Source Category prescribed in 40 CFR Part 430 by the U. S. Environmental Protection Agency (EPA). Discharges associated with the Effluent Limitation Guidelines are conveyed to the mill's wastewater treatment system and discharged through Outfall DSN 001. The following subcategories of these guidelines apply to the Stevenson Mill:

Subpart F – Semi-Chemical Subcategory (40 CFR 430.60) – Sodium Base Mills

- Semi-Chemical Pulp Production (Furnish to Both Paper Machines)

Subpart J – Secondary Fiber Non-Deink Subcategory (40 CFR 430.100)

- Corrugating Medium Finish (Furnish to Both Paper Machines)

The production rates associated with the highest annual average daily production rate in the most recent five-year period were used in the calculation of effluent limits based on the above referenced subparts. Table 2 summarizes the calculated effluent limits.

Table 2
Calculated Permit Limits from Effluent Limitation Guidelines
WestRock CP, LLC – Stevenson, Alabama

Category	Description	Limit Basis	Categorical Limits (lbs per 1,000 lbs)				Average Production (Tons per Day)	Allowable Limits (ppd)			
			Daily Maximum		Monthly Average			Daily Maximum		Monthly Average	
			BOD5	TSS	BOD5	TSS		BOD5	TSS	BOD5	TSS
Subpart F	Semi-Chemical (Sodium Base)	BPT	8.7	11	4.35	5.5	1,449.65	25,224	31,892	12,612	15,946
Subpart J	Secondary Fiber Non-Deink (Corrugated)	BPT	5.7	9.2	2.8	4.6	1,148.76	13,096	21,137	6,433	10,569
Categorical Totals							**2,598.41**	**38,320**	**53,029**	**19,045**	**26,515**
Current Permit Limits – DSN 001								**28,902**	**40,410**	**14,461**	**20,205**

Legend: BPT = Best practicable control technology currently available
ppd = pounds per day

2.2.1 Effluent BOD_5 and TSS

Treated wastewater consisting of process wastewater, landfill leachate, and storm water runoff are discharged to the Tennessee River through Outfall DSN 001. The production-based allocations for BOD_5 and TSS for process wastewater are summarized in Table 2. The BOD_5 permit limits in the 2001 NPDES permit were based upon a water quality model developed in the 1990's; the 2001 NPDES permit included seasonal limits. The winter limits from the 2001 NPDES permit were utilized year-round in the 2007 NPDES permit because the 2006 water quality model indicated that summer seasonal limits were not needed for water quality protection. In both the 2001 and 2007 NPDES permits, water quality-based limits for BOD_5 were utilized because they were more restrictive than effluent limitation guideline requirements. The 2007 limits for BOD_5 and TSS were continued in the August 2014 NPDES permit. Because the production-based allocations for both BOD_5 and TSS in Table 2 exceed the maximum daily and monthly average discharge limits from the previous NPDES permit, WestRock is proposing to incorporate the production-based limits for BOD_5 and TSS for DSN 001.

2.2.2 Effluent pH

Effluent pH limits of 6.0 (minimum daily) to 9.0 (maximum daily) are proposed to be continued. These limits are consistent with the existing limits and will be protective of water quality.

2.2.3 Effluent Pentachlorophenol and Trichlorophenol

Permit limits for pentachlorophenol and trichlorophenol are required by 40 CFR Part 430 Subparts F and J unless the permittee agrees to submit a certification of not using these compounds as biocides. Consistent with the requirements of the current permit, WestRock proposes to provide either annual analyses of these pollutants or an annual certification to ADEM that biocides containing pentachlorophenol and/or trichlorophenol were not used by the facility by January 28 following each calendar year of facility operation.

2.2.4 Effluent Biomonitoring

The current permit requires annual 48-hour acute biomonitoring at an in-stream waste concentration (IWC) of 3.0 percent. No changes are proposed to the effluent biomonitoring requirements in the current NPDES permit.

2.2.5 Receiving Stream Monitoring

The Stevenson Mill is currently required to conduct instream monitoring for dissolved oxygen (DO), water temperature, and pH, at a depth of five (5) feet below the river surface at several locations along the Tennessee River. Monitoring is required at a frequency of once every two weeks between May 1 and September 30, unless the instream DO is greater than 6.0 mg/L at Tennessee River Mile 405.7. The Stevenson Mill proposes to reduce the period for instream monitoring to July 1 through September 30. A review of the instream monitoring data collected by the Stevenson Mill since June 2016 following shutdown of the

Tennessee Valley Authority's Widows Creek Plant indicates that only one sample collected prior to July 1 was below 6.0 mg/L DO.

2.3 Treated Sanitary Wastewater (DSN 002)

WestRock treats sanitary wastewater and discharges the treated effluent to the Tennessee River through DSN 002. No changes are proposed to the DSN 002 monitoring requirements in the current NPDES permit.

2.4 Landfill Leachate and Storm Water (DSN 005)

WestRock collects leachate and storm water runoff from the Industrial Landfill in the Upper and Lower Leachate Ponds for physical treatment. Discharges from the Upper Leachate Pond can be pumped to the mill's Sludge Pond before discharge through DSN 001, and discharges from the Lower Leachate Pond (primarily storm water runoff) are discharged through DSN 005. WestRock is submitting the enclosed EPA Form 2C to modify the NPDES permit for the discharge of landfill leachate and storm water from both leachate ponds to existing storm water outfall DSN 005.

WestRock is proposing to monitor DSN 005 at a semi-annual frequency, with permit limits for pH (6.0 minimum and 9.0 maximum). WestRock is also proposing to monitor and report the following parameters with no permit limits:

- Flow;
- 5-Day Biochemical Oxygen Demand (mg/L); and
- Total Suspended Solids (mg/L).

2.5 Storm Water Outfalls (DSN 006 and DSN 022 – DSN 025)

WestRock currently discharges storm water associated with industrial activity through existing outfalls DSN 005, DSN 006, DSN 022, and DSN 023. ADEM General Permit ALG141308 authorizes discharges associated with rail car exterior washing operations that do not use solvents. Because the discharge from rail car exterior washing operations flows through existing storm water outfall DSN 023, WestRock is proposing to incorporate this activity into the individual NPDES permit.

The DSN 022 drainage area conveys storm water runoff from non-anthropogenic sheet flow stormwater runoff associated with rain events passing through a constructed wetlands that was installed in the late 1990's as part of the mill's expansion. While there is a sanitary wastewater treatment plant and an equipment laydown yard just north and slightly east of the constructed wetlands, the topography is elevated on the western and southern borders of these areas to prevent stormwater runoff from industrial activity into the constructed wetlands. From the constructed wetlands, storm water flows through a rip rap dam into an unnamed tributary to the Tennessee River.

Two discharge outfalls are currently permitted by ADEM General Permit ALG060506, which became effective on July 1, 2017. Outfall 002-1 contains settled storm water from the Wet Yard settling pond, and Outfall 001-1 consists of storm water runoff from the area west of the Wet Yard. WestRock is proposing to add DSN 024 and DSN 025 to the individual NPDES permit to replace the outfalls covered by ADEM General Permit ALG060506. These two outfalls discharge to unnamed tributaries to Bengis Creek.

WestRock is proposing to monitor outfalls DSN 022, DSN 023, and DSN 024 (storm water discharge from Wet Yard settling pond currently permitted as Outfall 002-1 in Permit No. ALG060506) at a semi-annual frequency, with a maximum permit limit of 15 mg/L for Oil and Grease. WestRock is also proposing to monitor and report the following parameters with no permit limits:

- Flow;
- pH;
- 5-Day Biochemical Oxygen Demand (mg/L); and
- Total Suspended Solids (mg/L).

No monitoring is proposed for outfalls DSN 006 and DSN 025 (storm water discharge from edge of Wet Yard currently permitted as Outfall 001-1 in Permit No. ALG060506). The water quality in the discharge from outfalls DSN 006 and DSN 025 resembles the water quality in the discharges from DSN 005 and DSN 024, respectively. Upon reissuance of the individual NPDES permit, WestRock will terminate General Permit Nos. ALG060506 and ALG141308.

The existing NPDES permit requires the development of a Best Management Practices (BMP) plan for controlling the contamination of storm water runoff from areas associated with industrial activity. This BMP plan has been developed and implemented by the facility. Results from the monitoring activities are used to evaluate the effectiveness of the BMP plan. The continued implementation of the plan in conjunction with the monitoring should be adequate to ensure protection of water quality in the receiving waters.

Section 3. NPDES Permit Renewal Application

This section includes the permit application forms used for this renewal application. In addition, a proposed draft of the reissued permit, using a mark-up of the existing permit, is also provided.

The U. S. Environmental Protection Agency (EPA) and ADEM forms associated with this permit renewal are provided in Appendix A of this report. These forms include the following:

- U. S. EPA Form 1
- U. S. EPA Form 2C (for Outfalls DSN 001, DSN 002, and DSN 005)
- U. S. EPA Form 2F (for existing Storm Water Outfalls DSN 006, DSN 022, and DSN 023, and proposed Storm Water Outfalls DSN 024 and DSN 025)
- ADEM Form 187

A site map showing the NPDES outfall locations is provided in Figure 1. This map is provided as a supplement to Item XI of the attached EPA Form 1.

3.2 Form 2C Sampling

WestRock collected the required composite and grab samples to complete the U. S. EPA Form 2C for renewal of the facility's NPDES permit. The contract laboratory reported detectable results for the following pollutants for which sampling was required for DSN 001. Explanations for these detectable results are provided below:

- Antimony, Arsenic, Chromium, Copper, Lead, Nickel, and Zinc (Metals, Cyanide, and Total Phenols) – Antimony, Arsenic, Chromium, Copper, Lead, Nickel, and Zinc are naturally occurring substances in wood. The facility processes thousands of tons of wood per day to produce semi-chemical pulp. While most of the residual metals are treated in the facility's effluent treatment system and removed with the primary clarifier sludge, Antimony, Arsenic, Chromium, Copper, Lead, Nickel, and Zinc were measured above the minimum detection levels in the facility's Form 2C effluent sampling.
- Total Cyanide (Metals, Cyanide, and Total Phenols) – Total Cyanide was measured above the minimum detection level in the facility's Form 2C effluent sampling; however, Total Cyanide was also measured in the method blank and is not believed to be present in DSN 001.
- Bis (2-Ethylhexyl) Phthalate (GC/MS Fraction – Base/Neutral Compounds) – Bis (2-Ethylhexyl) Phthalate was measured above the minimum detection level in the facility's Form 2C effluent sampling. This compound is not believed to be present in the facility's effluent because the facility does not use any chemicals containing Bis (2-Ethylhexyl Phthalate).

- There were no other positive results detected for the pollutants listed in pages V-3 through V-9 of the Form 2C for Outfall DSN 001.

3.3 Receiving Waters

Outfalls DSN 001 and DSN 002 discharge to a section of the Tennessee River (AL06030001-0205-102) that is on ADEM's Draft §303(d) List for atmospheric deposition of mercury. The Stevenson Mill does not burn coal as a fuel in any of the facility's boilers. Furthermore, mercury was below detection limits in the Form 2C sampling for both DSN 001 and DSN 002.

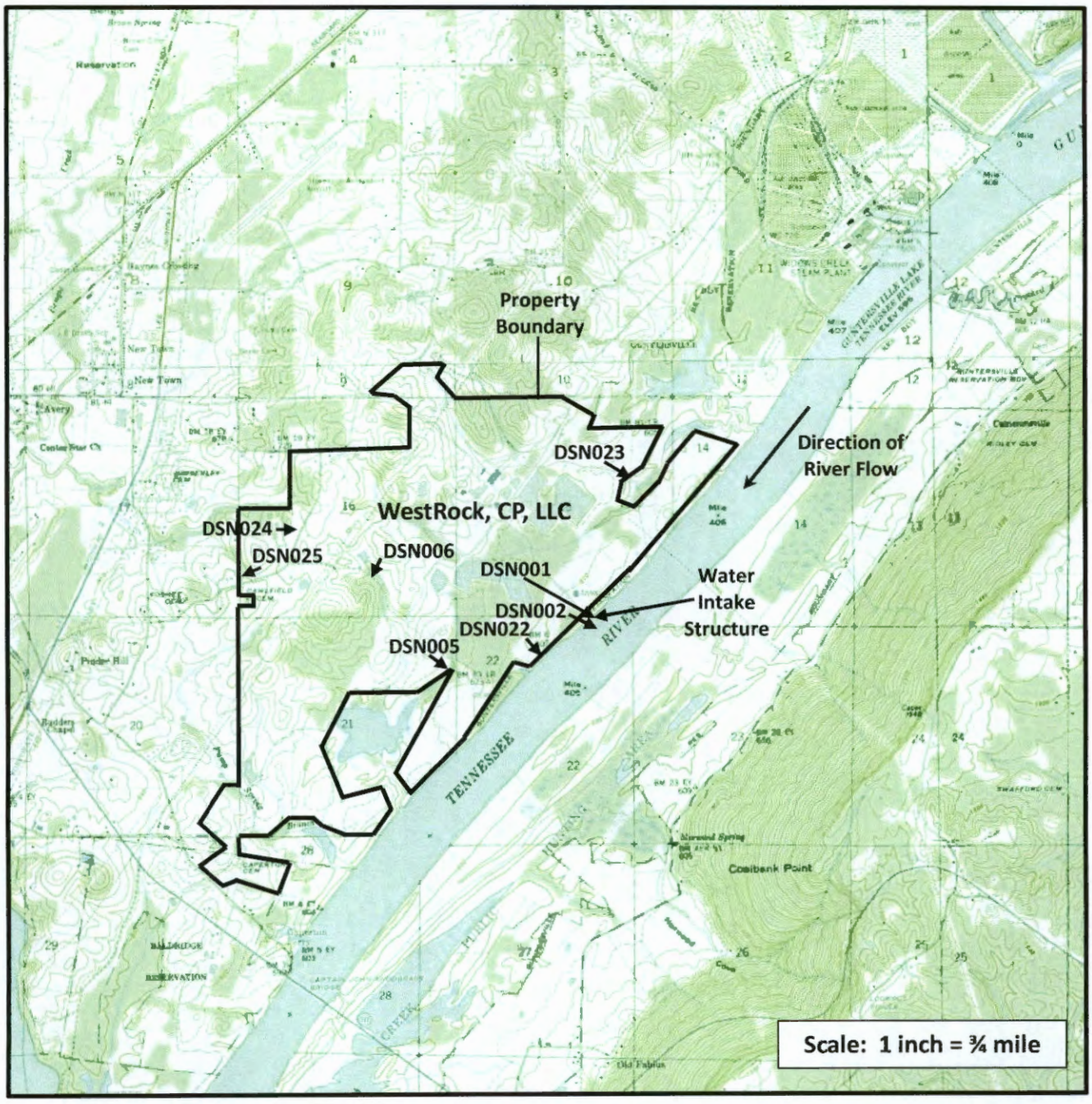


Figure 1. Topographic Map
WestRock CP, LLC – Stevenson Mill

WestRock

Appendix A
Renewal Application Forms

EPA Form 1

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

For Approved. OMB No. 2040-0086. Approval expires 5-31-92

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	ALD079103495		D
1	2 13	14	15

LABEL ITEMS

- I. EPA I.D. NUMBER
- III. FACILITY NAME
- V. FACILITY MAILING LIST
- VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been proved. Refer to the instructions for detailed item descriptions and for the legal authorization under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental from listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	MARK "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.?** (FORM 2A)	☐ 16	☒ 17	☐ 18
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.?** (FORM 2B)	☐ 19	☒ 20	☐ 21
C. Is this facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	☒ 22	☐ 23	☒ 24
D. Is this proposal facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.?** (FORM 2D)	☐ 25	☒ 26	☐ 27
E. Does or will this facility treat, store, or dispose of **hazardous wastes?** (FORM 3)	☐ 28	☒ 29	☐ 30
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	☐ 31	☒ 32	☐ 33
G. Do you or will you inject at this facility any produced water other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	☐ 34	☒ 35	☐ 36
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfer by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	☐ 37	☒ 38	☐ 39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area?** (FORM 5)	☐ 40	☒ 41	☐ 42
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment are?** (FORM 5)	☐ 43	☒ 44	☐ 45

III. NAME OF FACILITY

C 1 | SKIP (15, 16-29) | WESTROCK CP, LLC – STEVENSON MILL (30–69)

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2 (15) STROUD, STEPHEN, ENVIRONMENTAL MANAGER (16–45)	256 (46–48) 437 (49–51) 3507 (52–55)

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 (15) P. O. BOX 508 (16–45)

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 (15) STEVENSON (16–40)	AL (41–42)	35772 (47–51)

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 (15) 1611 COUNTY ROAD 85 (16–45)

B. COUNTY NAME

ACKSON (70)

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE
C 6 (15) STEVENSON (16–40)	AL (41–42)	35772 (47–51)	NA (52–54)

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VII. SIC CODES (4-digit, in order of priority)

A. FIRST		B. SECOND	
2631	(specify) PAPERBOARD MILL	2611	(specify) PULP MILL
C. THIRD		**D. FOURTH**	
	(specify)		(specify)

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
WESTROCK CP, LLC	☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)
F = FEDERAL; S = STATE; P = PRIVATE; M = PUBLIC (other than federal or state); O = OTHER (specify)

C. STATUS OF OPERATOR	(specify)	D. PHONE (area code & no.)
P		A 256 437 2161

E. STREET OR PO BOX	F. CITY OR TOWN	G. STATE	H. ZIP CODE
1611 COUNTY ROAD 85	STEVENSON	AL	35772

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	AL0022314	D. PSD (Air Emissions from Proposed Sources)	NA
B. UIC (Underground Injection of Fluids	NA	E. OTHER (specify)	705-0014 (Specify) MAJOR SOURCE OPERATING PERMIT
C. RCRA (Hazardous Wastes)	NA	E. OTHER (specify)	SEE ATTACHED LIST (Specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements. **See attached Figure 1 in Appendix B.**

XII. NATURE OF BUSINESS (provide a brief description)

WestRock CP, LLC's Stevenson Mill is an integrated unbleached semi-chemical pulp and paperboard mill that manufactures corrugated medium from virgin semi-chemical pulp and recycled pulp.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
DARRELL DAUBERT, GENERAL MANAGER		2/25/19

COMMENTS FOR OFFICIAL USE ONLY

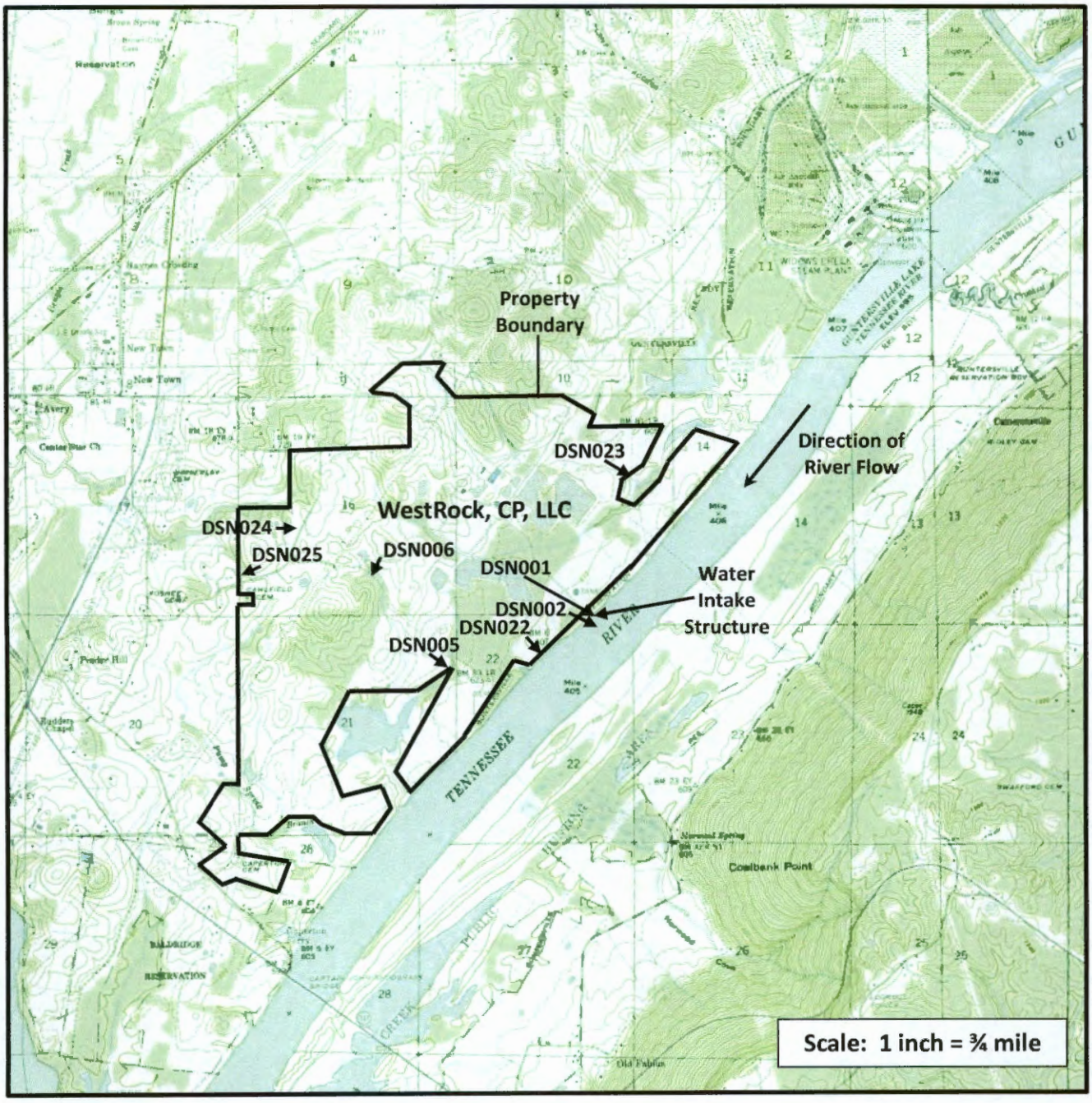

Figure 1. Topographic Map
WestRock CP, LLC – Stevenson Mill

WestRock

Attachment to EPA Form 1 Item X and ADEM Form 187 Item A.14
Environmental Permits
WestRock CP, LLC – Stevenson Mill

Type of Permit	Permit Number	Permit Held By
NPDES Individual Permit – Stevenson Mill	AL0022314	WestRock CP, LLC
NPDES General Permit – Stevenson Mill	ALG060506	WestRock CP, LLC
NPDES General Permit – Stevenson Mill	ALG141038	WestRock CP, LLC
Industrial Waste Landfill Permit – Stevenson Mill	36-06	WestRock CP, LLC
Scrap Tire License – Stevenson Mill	S0000008235	WestRock CP, LLC
Major Source Operating Permit – Stevenson Mill	705-0014	WestRock CP, LLC
ADECA Certificate of Use – Stevenson Mill	OWR-0002	WestRock CP, LLC
ADPH Radiation Permit	500	WestRock CP, LLC
Federal Communications Commission License	WQBK836	WestRock CP, LLC
Federal Communications Commission License	WQQJ448	WestRock CP, LLC

WestRock CP, LLC – Abbeville Chip Mill

Type of Permit	Permit Number	Permit Held By
NPDES General Permit – Abbeville Chip Mill	ALG060069	WestRock CP, LLC

EPA Form 2C

Please print or type in the unshaded areas only

EPA ID Number *(Copy from Item 1 of Form 1)*
ALD079103495

Form Approved
OMB No. 2040-0086
Approval expires 3-31-98

Form **2C** NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number *(list)*	B. Latitude			C. Longitude			D. Receiving Water *(name)*
	1. Deg	2. Min	3. Sec	1. Deg	2. Min	3. Sec	
001	34	51	18	-085	46	52	Tennessee River
002	34	51	18	-085	46	52	Tennessee River
005	34	51	19	-085	47	21	Unnamed Tributary to Tennessee River

II. Flows, Sources of Pollution, and Treatment Technologies

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed description in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined *(e.g., for certain mining activities)*, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and stormwater runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. Outfall Number *(list)*	2. Operation(s) Contributing Flow		3. Treatment		
	a. OPERATION *(list)*	b. AVERAGE FLOW *(include units)*	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Pulp Mill (Process)	3.4 MGD	Screening	1	T
	Power & Recovery (Process)	3.3 MGD	Sedimentation	1	U
	Paper Machine (Process)	1.1 MGD	Aerated Lagoons	3	B
	Woodyard (Storm Water)	<0.1 MGD	Activated Sludge	3	A
	Landfill Leachate	<0.1 MGD	Sludge Dewatering	5	C
	Storm Water	<0.2 MGD	Stabilization Ponds	3	G
	Total Water to Treatment	8.05 MGD	Sludge Pond	5	T
			Pressure Filtration	5	R
			Landfill	5	Q
			Land Application	5	P
			Discharge to Surface Water	4	A
002	Sanitary Sewer	0.004 MGD	Screening	1	T
	Total Flow to DSN 002	0.004 MGD	Grinding	1	L
			Activated Sludge	3	A
			Disinfection	2	F
			Discharge to Surface Water	4	A
005	Landfill Leachate		Sedimentation	1	U
	Storm Water		Discharge to Surface Water	4	A

FICIAL USE ONLY *(effluent guidelines sub-categories)*

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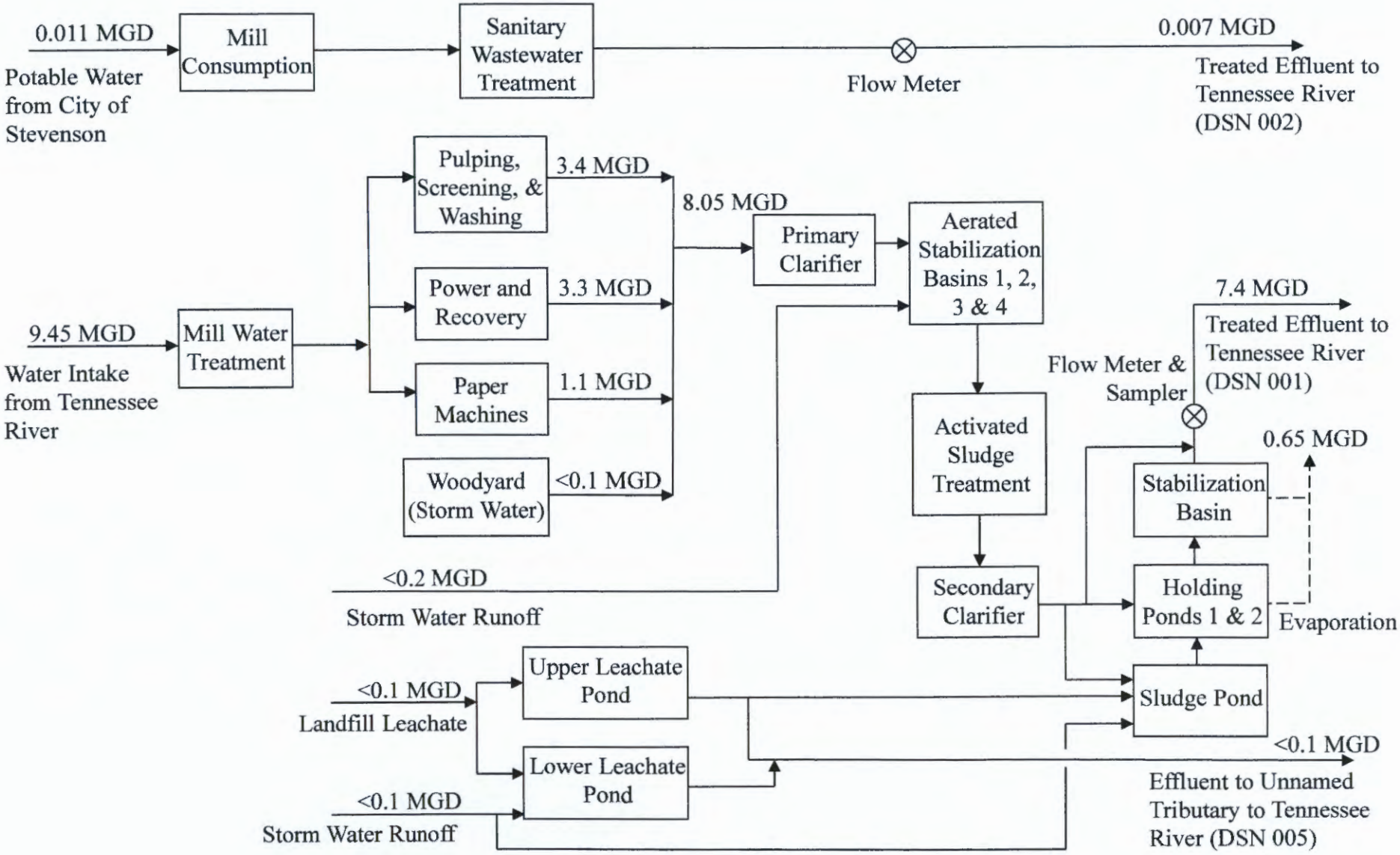
II.A. Line Drawing for WestRock CP, LLC – Stevenson Mill



Attachment to Form 2C Item II.B - Storm Water Calculation

WestRock CP, LLC – Stevenson MIll
NPDES Permit No. AL0022314

Average annual precipitation for Scottsboro, AL	57.6 inches per year
Site area drainage to the wastewater treatment system	103 acres
Runoff coefficient for overall site [2]	0.5
Calculated total runoff per year to wastewater treatment system	80.5 million gallons
Calculated daily average contribution to wastewater treatment system	**0.22 MGD**

(Note: Above value used on page 1 of Form 2C)

[1] Average annual precipitation obtained from http://countrystudies.us/united-states/weather/alabama/scottsboro.htm

[2] Runoff coefficient based on the average of the midpoint of range for heavy industrial area (0.6 – 0.9) and the midpoint of range for unimproved area (0.1 – 0.3) outlined in Table 3.1 of *Applied Hydrology*, C. W. Fetter, 1988, Second Edition.

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ **YES** *(complete the following table)* ☒ **NO** *(go to Section III)*

1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY a. DAYS PER WEEK (specify average)	3. FREQUENCY b. MONTHS PER YEAR (specify average)	4. FLOW a. FLOW RATE (in mgd) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (in mgd) 2. MAXIMUM DAILY	4. FLOW b. TOTAL VOLUME (specify with units) 1. LONG TERM AVERAGE	4. FLOW b. TOTAL VOLUME (specify with units) 2. MAXIMUM DAILY	4. FLOW c. DURATION (in days)

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ **YES** *(complete Item III-B)* ☐ **NO** *(go to Section IV)*

B. Are the limitations in the applicable effluent guideline expressed in terms of production *(or other measure of operation)*?

☒ **YES** *(complete Item III-C)* ☐ **NO** *(go to Section IV)*

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	2. AFFECTED OUTFALLS (list outfall numbers)
1,449.65	***Air-Dry Tons***	***Semi-Chemical Pulp and Paper (Sodium Base Mills)***	***DSN 001***
1,148.76	***Air-Dry Tons***	***Secondary Fiber Non-Deink (Corrugating Medium)***	***DSN 001***

IV. IMPROVEMENTS

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ **YES** *(complete the following table)* ☒ **NO** *(go to Item IV-B)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. No	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED
N/A					

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs *(or other environmental projects which may affect your discharges)* you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ **MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAM IS ATTACHED**

EPA ID Number *(Copy from Item 1 of Form 1)*
ALD079103495

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding - Complete one set of tables or each outfall - Annotate the outfall number in the space provided. **NOTE:** Tables V-A, V-B, and V-C are included on separate sheets number V-1 through V-9.

D: Use the space below t list any of the pollutants listed in Tables 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
None			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ **YES** *(list all such pollutants below)* ☒ **NO** *(go to Item VI-B)*

N/A

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☒ **YES** *(identify the test(s) and describe their purposes below)* ☐ **NO** *(go to Section VIII)*

Annual acute toxicity tests required for DSN 001 by the existing NPDES permit have all been successfully passed. Test reports have been submitted to ADEM in accordance with the NPDES permit.

VIII. CONTRACT ANALYSIS INFORMATION

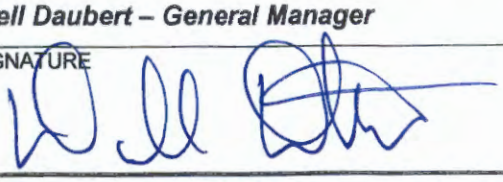
Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ **YES** *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ **NO** *(go to Section IX)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code & no.)*	D. POLLUTANTS ANALYZED *(list)*
Pace Analytical	***12065 Lebanon Road***	***(615) 758-5858***	***All except BOD, TSS,***
	Mount Juliet, TN 37122	( )	***pH, and temperature***
		( )	
		( )	
		( )	
		( )	
		( )	
		( )	
		( )	
		( )	
		( )	
		( )	
		( )	
		( )	

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE *(type or print)*	B. PHONE NO. *(area code & no.)*
Darrell Daubert – General Manager	***(256) 437-2161***
C. SIGNATURE	D. DATE SIGNED
	2/25/19

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*
ALD079103495

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* — **DSN 001**

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSIS	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(BOD)*	133	9,143	78.0	5,515	36.5	2,276	736	mg/L	lb/day			
b. Chemical Oxygen Demand *(COD)*	502	44,253	502	38,140	502	30,856	1	mg/L	lb/day			
c. Total Organic Carbon *(TOC)*	55.7	4,910	55.7	4,230	55.7	3,424	1	mg/L	lb/day			
d. Total Suspended Solids *(TSS)*	428	23,366	180	12,691	94.7	5,882	923	mg/L	lb/day			
e. Ammonia *(as N)*	2.63	232	2.63	200	0.33	20	21	mg/L	lb/day			
f. Flow	Value 10.57		Value 9.11		Value 7.37		1082		MGD	Value		
g. Temperature *(winter)*	Value 24.5		Value 20.2		Value 17.8		231	°C		Value		
h. Temperature *(summer)*	Value 32.7		Value 31.2		Value 30.1		235	°C		Value		
i. pH	Minimum 6.3	Maximum 8.6	Minimum 7.5	Maximum 8.2			919	STANDARD UNTIS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSIS	4. UNITS (specify if blank) a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)	☒	☐	<2.0	<176					1	mg/L	lb/day			
b. Chlorine, Total Residual	☐	☒												
c. Color	☒	☐	761						1	PCU				
d. Fecal Coliform	☐	☒												
e. Fluoride (16984-48-8)	☒	☐	0.092	8.1					1	mg/L	lb/day			
f. Nitrate-Nitrite *(as N)*	☒	☐	12.8	1,130	12.8	972	0.89	55	21	mg/L	lb/day			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	☒	☐	13.1	1,155	13.1	995	6.82	419	21	mg/L	lb/day			
h. Oil and Grease	☒	☐	<5.68	<501	<5.68	<432	<5.68	<349	1	mg/L	lb/day			
i. Phosphorus (as P), Total (7723-14-0)	☒	☐	4.48	395	4.48	340	1.70	104	21	mg/L	lb/day			
j. Radioactivity														
(1) Alpha, Total	☐	☒												
(2) Beta, Total	☐	☒												
(3) Radium, Total	☐	☒												
(4) Radium 226, Total	☐	☒												
k. Sulfate (as SO_4) (14808-79-8)	☒	☐	136	11,989					1	mg/L	lb/day			
l. Sulfide (as S)	☐	☒												
m. Sulfite (as SO_3) (14265-45-3)	☐	☒												
n. Surfactants	☒	☐	<0.012	<1.1					1	mg/L	lb/day			
o. Aluminum, Total (7429-90-5)	☒	☐	1.06	93.4					1	mg/L	lb/day			
p. Barium, Total (7440-39-3)	☒	☐	0.346	30.5					1	mg/L	lb/day			
q. Boron, Total (7440-42-8)	☒	☐	1.10	97.0					1	mg/L	lb/day			
r. Cobalt, Total (7440-48-4)	☒	☐	0.0027	0.24					1	mg/L	lb/day			
s. Iron, Total (7439-89-6)	☒	☐	0.782	68.9					1	mg/L	lb/day			
t. Magnesium, Total (7439-95-4)	☒	☐	9.32	822					1	mg/L	lb/day			
u. Molybdenum, Total (7439-98-7)	☒	☐	0.0053	0.47					1	mg/L	lb/day			
v. Manganese, Total (7439-96-5)	☒	☐	0.865	76.2					1	mg/L	lb/day			
w. Tin, Total (7440-31-5)	☒	☐	0.0022	0.19					1	mg/L	lb/day			
x. Titanium, Total (7440-32-6)	☒	☐	0.0188	1.66					1	mg/L	lb/day			

CONTINUE ON PAGE V-3

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*	OUTFALL NUMBER
ALD079103495	001

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1m. Antimony, Total (7440-36-0)	☒	☐	☐	0.00503	0.443					1	mg/L	lb/day			
2M. Arsenic, Total (7440-38-2)	☒	☐	☐	0.00444	0.391					1	mg/L	lb/day			
3M. Beryllium, Total (7440-41-7)	☒	☐	☐	< 0.0010	<0.088					1	mg/L	lb/day			
4M. Cadmium, Total (7440-43-9)	☒	☐	☐	< 0.0010	<0.088					1	mg/L	lb/day			
5M Chromium, Total (7440-47-3)	☒	☐	☐	0.00338	0.298					1	mg/L	lb/day			
6M Copper, Total (7440-50-8)	☒	☐	☐	0.0137	1.21					1	mg/L	lb/day			
7M Lead, Total (7439-92-1)	☒	☐	☐	0.00498	0.439					1	mg/L	lb/day			
8M Mercury, Total (7439-97-6)	☒	☐	☐	< 0.0002	<0.0176					1	mg/L	lb/day			
9M Nickel, Total (7440-02-0)	☒	☐	☐	0.00922	0.813					1	mg/L	lb/day			
10M Selenium, Total (7782-49-2)	☒	☐	☐	< 0.0020	<0.176					1	mg/L	lb/day			
11M Silver, Total (7440-22-4)	☒	☐	☐	< 0.0010	<0.088					1	mg/L	lb/day			
12M Thallium, Total (7440-28-0)	☒	☐	☐	< 0.0010	<0.088					1	mg/L	lb/day			
13M Zinc, Total (7440-66-6)	☒	☐	☐	0.0711	6.27					1	mg/L	lb/day			
14M Cyanide, Total (57-12-5)	☒	☐	☐	0.017	1.50					1	mg/L	lb/day			
15M Phenols, Total	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764--01-6)	☐	☐	☒	DESCRIBE RESULTS *N/A*											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☒	☐	☐	< 0.25	< 22.0					1	mg/L	lb/day			
2V Acrylonitrile (107-13-1)	☒	☐	☐	< 0.05	< 4.41					1	mg/L	lb/day			
3V Benzene (71-43-2)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
4V Bis (Chloromethyl) Ether (542-88-1)	☐	☐	☒												
5V Bromoform (75-25-2)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
6V Carbon Tetrachloride (56-23-5)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
7V Chlorobenzene (108-90-7)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
8V Chlorodibromomethane (124-48-1)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
9V Chloroethane (75-00-3)	☒	☐	☐	< 0.025	< 2.20					1	mg/L	lb/day			
10V 2-Chloroethylvinyl Ether (110-75-8)	☒	☐	☐	< 0.25	< 22.0					1	mg/L	lb/day			
11V Chloroform (67-66-3)	☒	☐	☐	< 0.025	< 2.20					1	mg/L	lb/day			
12V Dichlorobromomethane (75-27-4)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
13V Dichlorodifluoromethane (75-71-8)	☒	☐	☐	< 0.025	< 2.20					1	mg/L	lb/day			
14V 1,1-Dichloroethane (75-34-3)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
15V 1,2-Dichloroethane (107-06-2)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
16V 1,1-Dichloroethylene (75-35-4)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
17V 1,2-Dichloropropane (78-87-5)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
18V 1,3-Dichloropropylene (542-75-6)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
19V Ethylbenzene (100-41-4)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
20V Methyl Bromide (74-83-9)	☒	☐	☐	< 0.025	< 2.20					1	mg/L	lb/day			
21V Methyl Chloride (74-87-3)	☒	☐	☐	<0.0125	< 1.10					1	mg/L	lb/day			

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EPA I.D. NUMBER (copy from Item 1 of Form 1): ALD079103495

OUTFALL NUMBER: 001

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						d. NO. OF ANALYSIS	3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS (continued)															
22 V Methylene Chloride (75-09-2)	☒	☐	☐	< 0.025	< 2.20					1	mg/L	lb/day			
23V 1,1,2,2-Tetrachloroethane (79-34-5)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
24V Tetrachloroethylene (127-18-4)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
25V Toluene (108-88-3)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
26V 1,2-Trans-Dichloroethylene (156-60-5)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
27V 1,1,1-Trichloroethane (71-55-6)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
28V 1,1,2-Trichloroethane (79-00-5)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
29V Trichloroethylene (79-01-6)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
30V Trichlorofluoromethane (75-69-4)	☒	☐	☐	< 0.025	< 2.20					1	mg/L	lb/day			
31V Vinyl Chloride (75-01-4)	☒	☐	☐	< 0.005	< 0.44					1	mg/L	lb/day			
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
2A 2,4-Dichlorophenol (120-83-2)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
3A 2,4-Dimethylphenol (105-67-9)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
4A 4,6-Dinitro-O-cresol (534-52-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
5A 2,4-Dinitrophenol (51-28-5)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
6A 2-Nitrophenol (88-75-5)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
7A 4-Nitrophenol (100-02-7)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
8A P-Chloro-M-Cresol (59-50-7)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
9A Pentachlorophenol (87-86-5)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
10A Phenol (108-95-2)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
11A 2,4,6-Trichlorophenol (88-05-2)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
2B Acenaphthylene (208-96-8)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
3B Anthracene (120-12-7)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
4B Benzidine (92-87-5)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
5B Benzo (a) Anthracene (56-55-3)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
6B Benzo (a) Pyrene (50-32-8)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
7B 3,4-Benzo-fluoranthene (205-99-2)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
8B Benzo *(ghi)* Perylene (191-24-2)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
9B Benzo *(k)* Fluoranthene (207-08-9)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
10B Bis *(2-Chloroethoxy)* Methane (111-91-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
11B Bis *(2-Chloro-ethyl)* Ether (111-44-4)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
12B Bis *(2-Chloroisopropyl)* Ether (102-80-1	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
13B Bis*(2-Ethyl-hexyl)* Phthalate (117-81-7)	☒	☐	☐	0.0218	1.92					1	mg/L	lb/day			
14B 4-Bromo-phenyl Phenyl Ether (101-55-3)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
15B Butyl Benzyl Phthalate (85-68-7)	☒	☐	☐	< 0.003	<0.264					1	mg/L	lb/day			
16B 2-Chloro-naphthalene (91-68-7)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
17B 4-Chloro-phenyl Phenyl Ether (7005-72-3)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
18B Chrysene (218-01-9)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
19B Dibenzo *(a,h)* Anthracene (53-70-3)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
20B 1,2-Dichloro-benzene (95-50-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
21B 1,3-Dichloro-benzene (541-73-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			

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EPA I.D. NUMBER (copy from Item 1 of Form 1): ALD079103495

OUTFALL NUMBER: 001

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS - BASE/NEUTRAL COMPOUNDS (continued)															
22B 1,4-Dichlorobenzene (106-46-7)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
23B 3,3'-Dichlorobenzidine (91-94-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
24B Diethyl Phthalate (84-66-2)	☒	☐	☐	< 0.003	<0.264					1	mg/L	lb/day			
25B Dimethyl Phthalate (131-11-3)	☒	☐	☐	< 0.003	<0.264					1	mg/L	lb/day			
26B Di-N-Butyl Phthalate (84-74-2)	☒	☐	☐	< 0.003	<0.264					1	mg/L	lb/day			
27B 2,4-Dinitrotoluene (121-14-2)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
28B 2,6-Dinitrotoluene (606-20-2)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
29B Di-N-Octyl Phthalate (117-84-0)	☒	☐	☐	< 0.003	<0.264					1	mg/L	lb/day			
30B 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
31B Fluoranthene (206-44-0)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
32B Fluorene (86-73-7)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
33B Hexachlorobenzene (118-74-1)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
34B Hexachlorobutadiene (87-68-3)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
35B Hexachlorocyclopentadiene (77-47-4)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
36B Hexachloroethane (67-72-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
37B Indeno (1,2,3-cd) Pyrene (193-39-5)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
38B Isophorone (78-59-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
39B Napthalene (91-20-3)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
40B Nitrobenzene (98-95-3)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
41B N-Nitrosodimethylamine (62-75-9)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
42B N-Nitrosodi-N-Propylamine (621-64-7)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS *(continued)*															
43B N-Nitrosodiphenylamine (86-30-6)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
44B Phenanthrene (85-01-8)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
45B Pyrene (129-00-0)	☒	☐	☐	< 0.001	<0.088					1	mg/L	lb/day			
46B 1,2,4-Trichlorobenzene (120-82-1)	☒	☐	☐	< 0.010	<0.882					1	mg/L	lb/day			
GC/MS FRACTION - PESTICIDES															
1P Aldrin (309-00-2)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
2P α-Bhc (319-84-6)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
3P β-Bhc (319-85-7)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
4P γ-BHC (58-89-9)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
5P δ-BHC (319-86-8)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
6P Chlordane (57-74-9)	☒	☐	☐	< 0.50	<0.0441					1	ug/L	lb/day			
7P 4,4'-DDT (50-29-3)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
8P 4,4'-DDE (72-55-9)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
9P 4,4'-DDD (72-54-8)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
10P Dieldrin (60-57-1)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
11P α-Endosulfan (115-29-7)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
12P β-Endosulfan (115-29-7)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
13P Endosulfan Sulfate (1031-07-8)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
14P Endrin (72-20-8)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
15P Endrin Aldehyde (7421-93-4)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			
16P Heptachlor (76-44-8)	☒	☐	☐	< 0.05	<0.0044					1	ug/L	lb/day			

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EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: ***ALD079103495***

OUTFALL NUMBER: ***001***

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - PESTICIDES *(continued)*															
17P Heptachlor Epoxide (1024-57-3)	☒	☐	☐	*< 0.05*	*<0.0044*					*1*	*ug/L*	*lb/day*			
18P PCB-1242 (53469-21-9)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			
19P PCB-1254 (11097-69-1)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			
20P PCB-1221 (11104-28-2)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			
21P PCB-1232 (11141-16-5)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			
22P PCB-1248 (12672-29-6)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			
23P PCB-1260 (11096-82-5)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			
24P PCB-1016 (12674-11-2)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			
25P Toxaphene (8001-35-2)	☒	☐	☐	*< 0.50*	*<0.0441*					*1*	*ug/L*	*lb/day*			

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*
ALD079103495

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

DSN 002

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	2. EFFLUENT d. NO. OF ANALYSIS	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS (specify if blank) b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(BOD)*	12	7.5	4.0	1.9	0.74	0.042	153	mg/L	lb/day			
b. Chemical Oxygen Demand *(COD)*	< 10.0	< 6.2	< 10.0	< 4.8	< 10.0	< 0.57	1	mg/L	lb/day			
c. Total Organic Carbon *(TOC)*	1.08	0.67	1.08	0.52	1.08	0.061	1	mg/L	lb/day			
d. Total Suspended Solids *(TSS)*	28	17	15	7.2	6.4	0.36	155	mg/L	lb/day			
e. Ammonia *(as N)*	< 0.10	< 0.062	< 0.10	< 0.048	< 0.10	< 0.006	1	mg/L	lb/day			
f. Flow	Value 0.0746		Value 0.0576		Value 0.0068		1080		MGD	Value		
g. Temperature *(winter)*	Value 24 estimate		Value 20 estimate		Value 18 estimate			°C		Value		
h. Temperature *(summer)*	Value 32 estimate		Value 31 estimate		Value 30 estimate			°C		Value		
i. pH	Minimum 6.1	Maximum 8.1	Minimum 6.7	Maximum 7.1			35	STANDARD UNTIS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSIS	4. UNITS (specify if blank) a. CONCENTRATION	4. UNITS (specify if blank) b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
a. Bromide (24959-67-9)	☒	☐	<0.20	<0.12						mg/L	lb/day			
b. Chlorine, Total Residual	☒	☐	0.22	0.14	0.22	0.11	0.062	0.0035	35	mg/L	lb/day			
c. Color	☒	☐	<5.00						1	PCU				
d. Fecal Coliform	☒	☐	16		5.4		3.8		140	Col/100 mL				
e. Fluoride (16984-48-8)	☐	☒												
f. Nitrate-Nitrite *(as N)*	☒	☐	27.6	17.2					1	mg/L	lb/day			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'		3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic *(as N)*	☒	☐	3.22	2.00					1	mg/L	lb/day			
h. Oil and Grease	☐	☒												
i. Phosphorus *(as P)*, Total (7723-14-0)	☒	☐	2.07	1.29					1	mg/L	lb/day			
j. Radioactivity														
(1) Alpha, Total	☐	☒												
(2) Beta, Total	☐	☒												
(3) Radium, Total	☐	☒												
(4) Radium 226, Total	☐	☒												
k. Sulfate *(as SO_4)* (14808-79-8)	☒	☐	71.8	44.7					1	mg/L	lb/day			
l. Sulfide (as S)	☐	☒												
m. Sulfite *(as SO_3)*(14265-45-3)	☐	☒												
n. Surfactants	☐	☒												
o. Aluminum, Total (7429-90-5)	☒	☐	< 0.10	< 0.062					1	mg/L	lb/day			
p. Barium, Total (7440-39-3)	☒	☐	0.014	0.0087					1	mg/L	lb/day			
q. Boron, Total (7440-42-8)	☒	☐	< 0.20	< 0.12					1	mg/L	lb/day			
r. Cobalt, Total (7440-48-4)	☒	☐	<0.002	<0.0012					1	mg/L	lb/day			
s. Iron, Total (7439-89-6)	☒	☐	< 0.10	< 0.062					1	mg/L	lb/day			
t. Magnesium, Total (7439-95-4)	☒	☐	9.81	6.10					1	mg/L	lb/day			
u. Molybdenum, Total (7439-98-7)	☒	☐	<0.005	<0.0031					1	mg/L	lb/day			
v. Manganese, Total (7439-96-5)	☒	☐	<0.005	<0.0031					1	mg/L	lb/day			
w. Tin, Total (7440-31-5)	☒	☐	<0.001	<0.0006					1	mg/L	lb/day			
x. Titanium, Total (7440-32-6)	☒	☐	<0.010	<0.0062					1	mg/L	lb/day			

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER *(copy from item 1 of Form 1)*: ALD079103495

OUTFALL NUMBER: 002

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS			a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		a. CONCENTRATION	b. MASS	(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1m. Antimony, Total (7440-36-0)	☒	☐	☐	<0.002	<0.0012					1	mg/L	lb/day			
2M. Arsenic, Total (7440-38-2)	☒	☐	☐	0.00109	0.00068					1	mg/L	lb/day			
3M. Beryllium, Total (7440-41-7)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
4M. Cadmium, Total (7440-43-9)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
5M Chromium, Total (7440-47-3)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
6M Copper, Total (7440-50-8)	☒	☐	☐	0.00493	0.0031					1	mg/L	lb/day			
7M Lead, Total (7439-92-1)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
8M Mercury, Total (7439-97-6)	☒	☐	☐	<0.0002	<0.0001					1	mg/L	lb/day			
9M Nickel, Total (7440-02-0)	☒	☐	☐	0.00295	0.0018					1	mg/L	lb/day			
10M Selenium, Total (7782-49-2)	☒	☐	☐	<0.002	<0.0012					1	mg/L	lb/day			
11M Silver, Total (7440-22-4)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
12M Thallium, Total (7440-28-0)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
13M Zinc, Total (7440-66-6)	☒	☐	☐	0.0366	0.0228					1	mg/L	lb/day			
14M Cyanide, Total (57-12-5)	☒	☐	☐	<0.005	<0.0031					1	mg/L	lb/day			
15M Phenols, Total	☒	☐	☐	<0.040	<0.025					1	mg/L	lb/day			
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☒	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☒	☐	☐	<0.050	<0.031					1	mg/L	lb/day			
2V Acrylonitrile (107-13-1)	☒	☐	☐	<0.010	<0.006					1	mg/L	lb/day			
3V Benzene (71-43-2)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
4V Bis (Chloromethyl) Ether (542-88-1)	☐	☐	☒												
5V Bromoform (75-25-2)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
6V Carbon Tetrachloride (56-23-5)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
7V Chlorobenzene (108-90-7)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
8V Chlorodibromomethane (124-48-1)	☒	☐	☐	0.0032	0.0020					1	mg/L	lb/day			
9V Chloroethane (75-00-3)	☒	☐	☐	<0.005	<0.0031					1	mg/L	lb/day			
10V 2-Chloroethylvinyl Ether (110-75-8)	☒	☐	☐	<0.050	<0.031					1	mg/L	lb/day			
11V Chloroform (67-66-3)	☒	☐	☐	0.058	0.036					1	mg/L	lb/day			
12V Dichlorobromoethane (75-27-4)	☒	☐	☐	0.0194	0.012					1	mg/L	lb/day			
13V Dichlorodifluoromethane (75-71-8)	☒	☐	☐	<0.005	<0.0031					1	mg/L	lb/day			
14V 1,1-Dichloroethane (75-34-3)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
15V 1,2-Dichloroethane (107-06-2)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
16V 1,1-Dichloroethylene (75-35-4)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
17V 1,2-Dichloropropane (78-87-5)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
18V 1,3-Dichloropropylene (542-75-6)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
19V Ethylbenzene (100-41-4)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
20V Methyl Bromide (74-83-9)	☒	☐	☐	<0.005	<0.0031					1	mg/L	lb/day			
21V Methyl Chloride (74-87-3)	☒	☐	☐	<0.0025	<0.0016					1	mg/L	lb/day			

CONTINUED FROM PAGE V-4

EPA I.D. NUMBER (copy from Item 1 of Form 1): ALD079103495

OUTFALL NUMBER: 002

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS			a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		a. CONCENTRATION	b. MASS	(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS (continued)															
22 V Methylene Chloride (75-09-2)	☒	☐	☐	<0.005	<0.0031					1	mg/L	lb/day			
23V 1,1,2,2-Tetra-Chloroethane (79-34-5)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
24V Tetrachloro-ethylene (127-18-4)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
25V Toluene (108-88-3)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
26V 1,2-Trans-Dichloroethylene (156-60-5)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
27V 1,1,1-Tri-chloroethane (71-55-6)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
28V 1,1,2-Tri-chloroethane (79-00-5)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
29V Trichloro-ethylene (79-01-6)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
30V Trichloro-fluoromethane (75-69-4)	☒	☐	☐	<0.005	<0.0031					1	mg/L	lb/day			
31V Vinyl Chloride (75-01-4)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
2A 2,4-Dichloro-phenol (120-83-2)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
3A 2,4-Dimethyl-phenol (105-67-9)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
4A 4,6-Dinitro-O-cresol (534-52-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
5A 2,4-Dinitro-phenol (51-28-5)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
6A 2-Nitro-phenol (88-75-5)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
7A 4-Ntro-phenol (100-02-7)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
8A P-Chloro-M-Cresol (59-50-7)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
9A Penta-chlorophenol (87-86-5)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
10A Phenol (108-95-2)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
11A 2,4,6-Tri-chlorophenol (88-05-2)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
2B Acenaphthylene (208-96-8)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
3B Anthracene (120-12-7)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
4B Benzidine (92-87-5)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
5B Benzo (a) Anthracene (56-55-3)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
6B Benzo (a) Pyrene (50-32-8)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
7B 3,4-Benzo-fluoranthene (205-99-2)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
8B Benzo *(ghi)* Perylene (191-24-2)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
9B Benzo *(k)* Fluoranthene (207-08-9)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
10B Bis *(2-Chloroethoxy)* Methane (111-91-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
11B Bis *(2-Chloro-ethyl)* Ether (111-44-4)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
12B Bis *(2-Chloroisopropyl)* Ether (102-80-1	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
13B Bis*(2-Ethyl-hexyl)* Phthalate (117-81-7)	☒	☐	☐	0.0114	0.0071					1	mg/L	lb/day			
14B 4-Bromo-phenyl Phenyl Ether (101-55-3)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
15B Butyl Benzyl Phthalate (85-68-7)	☒	☐	☐	<0.003	<0.0019					1	mg/L	lb/day			
16B 2-Chloro-naphthalene (91-68-7)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
17B 4-Chloro-phenyl Phenyl Ether (7005-72-3)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
18B Chrysene (218-01-9)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
19B Dibenzo *(a,h)* Anthracene (53-70-3)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
20B 1,2-Dichloro-benzene (95-50-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
21B 1,3-Dichloro-benzene (541-73-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			

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EPA I.D. NUMBER (copy from Item 1 of Form 1): ALD079103495

OUTFALL NUMBER: 002

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - BASE/NEUTRAL COMPOUNDS (continued)															
22B 1,4-Dichlorobenzene (106-46-7)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
23B 3,3'-Dichlorobenzidine (91-94-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
24B Diethyl Phthalate (84-66-2)	☒	☐	☐	<0.003	<0.0019					1	mg/L	lb/day			
25B Dimethyl Phthalate (131-11-3)	☒	☐	☐	<0.003	<0.0019					1	mg/L	lb/day			
26B Di-N-Butyl Phthalate (84-74-2)	☒	☐	☐	<0.003	<0.0019					1	mg/L	lb/day			
27B 2,4-Dinitrotoluene (121-14-2)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
28B 2,6-Dinitrotoluene (606-20-2)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
29B Di-N-Octyl Phthalate (117-84-0)	☒	☐	☐	<0.003	<0.0019					1	mg/L	lb/day			
30B 1,2-Diphenylhydrazine (as Azo-benzene) (122-66-7)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
31B Fluoranthene (206-44-0)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
32B Fluorene (86-73-7)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
33B Hexachlorobenzene (118-74-1)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
34B Hexachlorobutadiene (87-68-3)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
35B Hexachlorocyclopentadiene (77-47-4)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
36B Hexachloroethane (67-72-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
37B Indeno (1,2,3-cd) Pyrene (193-39-5)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
38B Isophorone (78-59-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
39B Napthalene (91-20-3)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
40B Nitrobenzene (98-95-3)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
41B N-Nitrosodimethylamine (62-75-9)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
42B N-Nitrosodi-N-Propylamine (621-64-7)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS *(continued)*															
43B N-Nitrosodiphenylamine (86-30-6)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
44B Phenanthrene (85-01-8)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
45B Pyrene (129-00-0)	☒	☐	☐	<0.001	<0.0006					1	mg/L	lb/day			
46B 1,2,4-Trichlorobenzene (120-82-1)	☒	☐	☐	<0.010	<0.0062					1	mg/L	lb/day			
GC/MS FRACTION - PESTICIDES															
1P Aldrin (309-00-2)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
2P α-Bhc (319-84-6)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
3P β-Bhc (319-85-7)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
4P γ-BHC (58-89-9)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
5P δ-BHC (319-86-8)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
6P Chlordane (57-74-9)	☒	☐	☐	<0.50	$<3x10^{-4}$					1	ug/L	lb/day			
7P 4,4'-DDT (50-29-3)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
8P 4,4'-DDE (72-55-9)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
9P 4,4'-DDD (72-54-8)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
10P Dieldrin (60-57-1)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
11P α-Endosulfan (115-29-7)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
12P β-Endosulfan (115-29-7)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
13P Endosulfan Sulfate (1031-07-8)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
14P Endrin (72-20-8)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
15P Endrin Aldehyde (7421-93-4)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			
16P Heptachlor (76-44-8)	☒	☐	☐	<0.05	$<3x10^{-5}$					1	ug/L	lb/day			

CONTINUE ON PAGE V-9

CONTINUED FROM PAGE V-6

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: *ALD079103495*

OUTFALL NUMBER: *002*

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - PESTICIDES *(continued)*															
17P Heptachlor Epoxide (1024-57-3)	☒	☐	☐	*<0.05*	*<3x10^{-5}*					*1*	*ug/L*	*lb/day*			
18P PCB-1242 (53469-21-9)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			
19P PCB-1254 (11097-69-1)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			
20P PCB-1221 (11104-28-2)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			
21P PCB-1232 (11141-16-5)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			
22P PCB-1248 (12672-29-6)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			
23P PCB-1260 (11096-82-5)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			
24P PCB-1016 (12674-11-2)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			
25P Toxaphene (8001-35-2)	☒	☐	☐	*<0.50*	*<3x10^{-4}*					*1*	*ug/L*	*lb/day*			

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*
ALD079103495

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* — **DSN 005**

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSIS	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(BOD)*	31	6.2	31	6.2	13	2.2	6	mg/L	lb/day			
b. Chemical Oxygen Demand *(COD)*	<40.0	<8.01	<40.0	<8.01	<40.0	<6.67	2	mg/L	lb/day			
c. Total Organic Carbon *(TOC)*	51.6	10.3	51.6	10.3	51.0	8.51	2	mg/L	lb/day			
d. Total Suspended Solids *(TSS)*	200	40	200	40	90	15	6	mg/L	lb/day			
e. Ammonia *(as N)*	0.27	0.054	0.27	0.054	0.16	0.027	2	mg/L	lb/day			
f. Flow	Value 0.024		Value 0.024		Value 0.020		6		MGD	Value		
g. Temperature *(winter)*	Value 24 estimate		Value 20 estimate		Value 18 estimate			°C		Value		
h. Temperature *(summer)*	Value 32 estimate		Value 31 estimate		Value 30 estimate			°C		Value		
i. pH	Minimum 7.4	Maximum 8.8	Minimum 7.4	Maximum 8.8			6	STANDARD UNTIS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSIS	4. UNITS (specify if blank) a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)	☐	☒												
b. Chlorine, Total Residual	☐	☒												
c. Color	☒	☐	145		145		111		2	PCU				
d. Fecal Coliform	☐	☒												
e. Fluoride (16984-48-8)	☐	☒												
f. Nitrate-Nitrite *(as N)*	☒	☐	0.266	0.053	0.266	0.053	0.262	0.0437	2	mg/L	lb/day			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'		3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic *(as N)*	☒	☐	<0.10	<0.020	<0.10	<0.020	<0.10	<0.017	2	mg/L	lb/day			
h. Oil and Grease	☒	☐	<6.10	<1.22	<6.10	<1.22	<6.10	<1.02	8	mg/L	lb/day			
i. Phosphorus *(as P)*, Total (7723-14-0)	☒	☐	0.755	0.151	0.755	0.151	0.540	0.090	2	mg/L	lb/day			
j. Radioactivity														
(1) Alpha, Total	☐	☒												
(2) Beta, Total	☐	☒												
(3) Radium, Total	☐	☒												
(4) Radium 226, Total	☐	☒												
k. Sulfate *(as SO_4)* *(14808-79-8)*	☒	☐	13.3	2.66	13.3	2.66	13.3	2.22	2	mg/L	lb/day			
l. Sulfide (as S)	☐	☒												
m. Sulfite *(as SO_3)(14265-45-3)*	☐	☒												
n. Surfactants	☒	☐	<0.0125	<0.0025	<0.0125	<0.0025	<0.0125	<0.0021	2	mg/L	lb/day			
o. Aluminum, Total (7429-90-5)	☒	☐	0.436	0.0873	0.436	0.0873	0.406	0.0677	-	mg/L	lb/day			
p. Barium, Total (7440-39-3)	☒	☐	0.132	0.0264	0.132	0.0264	0.128	0.0214	2	mg/L	lb/day			
q. Boron, Total (7440-42-8)	☒	☐	0.473	0.0947	0.473	0.0947	0.468	0.0781	2	mg/L	lb/day			
r. Cobalt, Total (7440-48-4)	☒	☐	<0.002	<0.0004	<0.002	<0.0004	<0.002	<0.0003	2	mg/L	lb/day			
s. Iron, Total (7439-89-6)	☒	☐	1.27	0.254	1.27	0.254	1.12	0.187	2	mg/L	lb/day			
t. Magnesium, Total (7439-95-4)	☒	☐	38.2	7.64	38.2	7.64	36.7	6.12	2	mg/L	lb/day			
u. Molybdenum, Total (7439-98-7)	☒	☐	<0.005	<0.001	<0.005	<0.001	<0.005	<0.0008	2	mg/L	lb/day			
v. Manganese, Total (7439-96-5)	☒	☐	0.294	0.0588	0.294	0.0588	0.288	0.0480	2	mg/L	lb/day			
w. Tin, Total (7440-31-5)	☒	☐	<0.001	<0.0002	<0.001	<0.0002	<0.001	<0.0002	2	mg/L	lb/day			
x. Titanium, Total (7440-32-6)	☒	☐	0.0148	0.00296	0.0148	0.00296	0.0099	0.0017	2	mg/L	lb/day			

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
ALD079103495	005

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS			a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		a. CONCENTRATION	b. MASS	(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1m. Antimony, Total (7440-36-0)	☒	☐	☐	<0.002	<0.0004	<0.002	<0.0004	<0.002	<0.0004	2	mg/L	lb/day			
2M. Arsenic, Total (7440-38-2)	☒	☐	☐	0.0025	0.0005	0.0025	0.0005	0.0025	0.0004	2	mg/L	lb/day			
3M. Beryllium, Total (7440-41-7)	☒	☐	☐	<0.001	<0.0002	<0.001	<0.0002	<0.001	<0.0002	2	mg/L	lb/day			
4M. Cadmium, Total (7440-43-9)	☒	☐	☐	<0.001	<0.0002	<0.001	<0.0002	<0.001	<0.0002	2	mg/L	lb/day			
5M Chromium, Total (7440-47-3)	☒	☐	☐	0.00116	0.00023	0.00116	0.00023	0.00083	0.00014	2	mg/L	lb/day			
6M Copper, Total (7440-50-8)	☒	☐	☐	0.00429	0.00086	0.00429	0.00086	0.00355	0.00059	2	mg/L	lb/day			
7M Lead, Total (7439-92-1)	☒	☐	☐	0.00426	0.00085	0.00426	0.00085	0.00238	0.00040	2	mg/L	lb/day			
8M Mercury, Total (7439-97-6)	☒	☐	☐	<0.0002	<0.00004	<0.0002	<0.00004	<0.0002	<0.00004	2	mg/L	lb/day			
9M Nickel, Total (7440-02-0)	☒	☐	☐	0.00267	0.00053	0.00267	0.00053	0.00243	0.00041	2	mg/L	lb/day			
10M Selenium, Total (7782-49-2)	☒	☐	☐	<0.002	<0.0004	<0.002	<0.0004	<0.002	<0.0004	2	mg/L	lb/day			
11M Silver, Total (7440-22-4)	☒	☐	☐	<0.001	<0.0002	<0.001	<0.0002	<0.001	<0.0002	2	mg/L	lb/day			
12M Thallium, Total (7440-28-0)	☒	☐	☐	<0.001	<0.0002	<0.001	<0.0002	<0.001	<0.0002	2	mg/L	lb/day			
13M Zinc, Total (7440-66-6)	☒	☐	☐	<0.01	<0.002	<0.01	<0.002	<0.01	<0.002	2	mg/L	lb/day			
14M Cyanide, Total (57-12-5)	☒	☐	☐	0.064	0.013	0.064	0.013	0.0435	0.0087	2	mg/L	lb/day			
15M Phenols, Total	☒	☐	☐	<0.01	<0.002	<0.01	<0.002	<0.01	<0.002	2	mg/L	lb/day			
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☒	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS															
1V. *Acrolein (107-02-8)*	☐	☐	☒												
2V *Acrylonitrille (107-13-1)*	☐	☐	☒												
3V Benzene (71-43-2)	☐	☐	☒												
4V Bis *(Chloromethyl)* Ether (542-88-1)	☐	☐	☒												
5V Bromoform (75-25-2)	☐	☐	☒												
6V Carbon Tetrachloride (56-23-5)	☐	☐	☒												
7V Chlorobenzene (108-90-7)	☐	☐	☒												
8V Chlorodibromomethane (124-48-1)	☐	☐	☒												
9V Chloroethane (75-00-3)	☐	☐	☒												
10V 2-Chloroethylvinyl Ether (110-75-8)	☐	☐	☒												
11V Chloroform (67-66-3)	☐	☐	☒												
12V Dichlorobromoethane (75-27-4)	☐	☐	☒												
13V Dichlorodifluoromethane (75-71-8)	☐	☐	☒												
14V 1,1-Dichloroethane (75-34-3)	☐	☐	☒												
15V 1,2-Dichloroethane (107-06-2)	☐	☐	☒												
16V 1,1-Dichloroethylene (75-35-4)	☐	☐	☒												
17V 1,2-Dichloropropane (78-87-5)	☐	☐	☒												
18V 1,3-Dichloropropylene (542-75-6)	☐	☐	☒												
19V Ethylbenzene (100-41-4)	☐	☐	☒												
20V Methyl Bromide (74-83-9)	☐	☐	☒												
21V Methyl Chloride (74-87-3)	☐	☐	☒												

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: ALD079103495

OUTFALL NUMBER: 005

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS *(continued)*															
22 V Methylene Chloride (75-09-2)	☐	☐	☒												
23V 1,1,2,2-Tetra-Chloroethane (79-34-5)	☐	☐	☒												
24V Tetrachloro-ethylene (127-18-4)	☐	☐	☒												
25V Toluene (108-88-3)	☐	☐	☒												
26V 1,2-Trans-Dichloroethylene (156-60-5)	☐	☐	☒												
27V 1,1,1-Tri-chloroethane (71-55-6)	☐	☐	☒												
28V 1,1,2-Tri-chloroethane (79-00-5)	☐	☐	☒												
29V Trichloro-ethylene (79-01-6)	☐	☐	☒												
30V Trichloro-fluoromethane (75-69-4)	☐	☐	☒												
31V Vinyl Chloride (75-01-4)	☐	☐	☒												
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (95-57-8)	☐	☐	☒												
2A 2,4-Dichloro-phenol (120-83-2)	☐	☐	☒												
3A 2,4-Dimethyl-phenol (105-67-9)	☐	☐	☒												
4A 4,6-Dinitro-O-cresol (534-52-1)	☐	☐	☒												
5A 2,4-Dinitro-phenol (51-28-5)	☐	☐	☒												
6A 2-Nitro-phenol (88-75-5)	☐	☐	☒												
7A 4-Ntro-phenol (100-02-7)	☐	☐	☒												
8A P-Chloro-M-Cresol (59-50-7)	☐	☐	☒												
9A Penta-chlorophenol (87-86-5)	☐	☐	☒												
10A Phenol (108-95-2)	☐	☐	☒												
11A 2,4,6-Tri-chlorophenol (88-05-2)	☐	☐	☒												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)	☐	☐	☒												
2B Acenaphthylene (208-96-8)	☐	☐	☒												
3B Anthracene (120-12-7)	☐	☐	☒												
4B Benzidine (92-87-5)	☐	☐	☒												
5B Benzo (a) Anthracene (56-55-3)	☐	☐	☒												
6B Benzo (a) Pyrene (50-32-8)	☐	☐	☒												
7B 3,4-Benzofluoranthene (205-99-2)	☐	☐	☒												
8B Benzo *(ghi)* Perylene (191-24-2)	☐	☐	☒												
9B Benzo *(k)* Fluoranthene (207-08-9)	☐	☐	☒												
10B Bis *(2-Chloroethoxy)* Methane (111-91-1)	☐	☐	☒												
11B Bis *(2-Chloroethyl)* Ether (111-44-4)	☐	☐	☒												
12B Bis *(2-Chloroisopropyl)* Ether (102-80-1	☐	☐	☒												
13B Bis*(2-Ethylhexyl)* Phthalate (117-81-7)	☐	☐	☒												
14B 4-Bromophenyl Phenyl Ether (101-55-3)	☐	☐	☒												
15B Butyl Benzyl Phthalate (85-68-7)	☐	☐	☒												
16B 2-Chloronaphthalene (91-68-7)	☐	☐	☒												
17B 4-Chlorophenyl Phenyl Ether (7005-72-3)	☐	☐	☒												
18B Chrysene (218-01-9)	☐	☐	☒												
19B Dibenzo *(a,h)* Anthracene (53-70-3)	☐	☐	☒												
20B 1,2-Dichlorobenzene (95-50-1)	☐	☐	☒												
21B 1,3-Dichlorobenzene (541-73-1)	☐	☐	☒												

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CONTINUED FROM PAGE V-6

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: **ALD079103495**

OUTFALL NUMBER: **005**

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - BASE/NEUTRAL COMPOUNDS *(continued)*															
22B 1,4-Dichlorobenzene (106-46-7)	☐	☐	☒												
23B 3,3'-Dichlorobenzidine (91-94-1)	☐	☐	☒												
24B Diethyl Phthalate (84-66-2)	☐	☐	☒												
25B Dimethyl Phthalate (131-11-3)	☐	☐	☒												
26B Di-N-Butyl Phthalate (84-74-2)	☐	☐	☒												
27B 2,4-Dinitrotoluene (121-14-2)	☐	☐	☒												
28B 2,6-Dinitrotoluene (606-20-2)	☐	☐	☒												
29B Di-N-Octyl Phthalate (117-84-0)	☐	☐	☒												
30B 1,2-Diphenylhydrazine *(as Azo-benzene)* (122-66-7)	☐	☐	☒												
31B Fluoranthene (206-44-0)	☐	☐	☒												
32B Fluorene (86-73-7)	☐	☐	☒												
33B Hexachlorobenzene (118-74-1)	☐	☐	☒												
34B Hexachlorobutadiene (87-68-3)	☐	☐	☒												
35B Hexachlorocyclopentadiene (77-47-4)	☐	☐	☒												
36B Hexachloroethane (67-72-1)	☐	☐	☒												
37B Indeno *(1,2,3-cd)* Pyrene (193-39-5)	☐	☐	☒												
38B Isophorone (78-59-1)	☐	☐	☒												
39B Napthalene (91-20-3)	☐	☐	☒												
40B Nitrobenzene (98-95-3)	☐	☐	☒												
41B N-Nitrosodimethylamine (62-75-9)	☐	☐	☒												
42B N-Nitrosodi-N-Propylamine (621-64-7)	☐	☐	☒												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS *(continued)*															
43B N-Nitrosodiphenylamine (86-30-6)	☐	☐	☒												
44B Phenanthrene (85-01-8)	☐	☐	☒												
45B Pyrene (129-00-0)	☐	☐	☒												
46B 1,2,4-Trichlorobenzene (120-82-1)	☐	☐	☒												
GC/MS FRACTION - PESTICIDES															
1P Aldrin (309-00-2)	☐	☐	☒												
2P α-Bhc (319-84-6)	☐	☐	☒												
3P β-Bhc (319-85-7)	☐	☐	☒												
4P γ-BHC (58-89-9)	☐	☐	☒												
5P δ-BHC (319-86-8)	☐	☐	☒												
6P Chlordane (57-74-9)	☐	☐	☒												
7P 4,4'-DDT (50-29-3)	☐	☐	☒												
8P 4,4'-DDE (72-55-9)	☐	☐	☒												
9P 4,4'-DDD (72-54-8)	☐	☐	☒												
10P Dieldrin (60-57-1)	☐	☐	☒												
11P α-Endosulfan (115-29-7)	☐	☐	☒												
12P β-Endosulfan (115-29-7)	☐	☐	☒												
13P Endosulfan Sulfate (1031-07-8)	☐	☐	☒												
14P Endrin (72-20-8)	☐	☐	☒												
15P Endrin Aldehyde (7421-93-4)	☐	☐	☒												
16P Heptachlor (76-44-8)	☐	☐	☒												

CONTINUE ON PAGE V-9

CONTINUED FROM PAGE V-6

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: **ALD079103495**

OUTFALL NUMBER: **005**

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X'			3. EFFLUENT							4. UNITS *(specify if blank)*		5. INTAKE *(optional)*		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - PESTICIDES *(continued)*															
17P Heptachlor Epoxide (1024-57-3)	☐	☐	☒												
18P PCB-1242 (53469-21-9)	☐	☐	☒												
19P PCB-1254 (11097-69-1)	☐	☐	☒												
20P PCB-1221 (11104-28-2)	☐	☐	☒												
21P PCB-1232 (11141-16-5)	☐	☐	☒												
22P PCB-1248 (12672-29-6)	☐	☐	☒												
23P PCB-1260 (11096-82-5)	☐	☐	☒												
24P PCB-1016 (12674-11-2)	☐	☐	☒												
25P Toxaphene (8001-35-2)	☐	☐	☒												

CONTINUE ON PAGE V-9

EPA Form 2F

Please print or type in the unshaded areas	EPA ID Number *(copy from item I of Form 1)* **ALD079103495**	Form Approved. OMB No. 2040-0086 Approval expires 5-31-92

Form **2F** NPDES

EPA

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number *(list)*	B. Latitude			C. Longitude			D. Receiving Water *(name)*
005	***34***	***51***	***19***	***-085***	***47***	***21***	***Unnamed Tributary to Tennessee River***
006	***34***	***51***	***38***	***-085***	***47***	***42***	***Unnamed Tributary to Tennessee River***
022	***34***	***51***	***22***	***-085***	***46***	***51***	***Unnamed Tributary to Tennessee River***
023	***34***	***52***	***05***	***-085***	***46***	***20***	***Unnamed Tributary to Tennessee River***
024	***34***	***51***	***50***	***-085***	***48***	***09***	***Unnamed Tributary to Bengis Creek***
025	***34***	***51***	***42***	***-085***	***48***	***24***	***Unnamed Tributary to Bengis Creek***

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

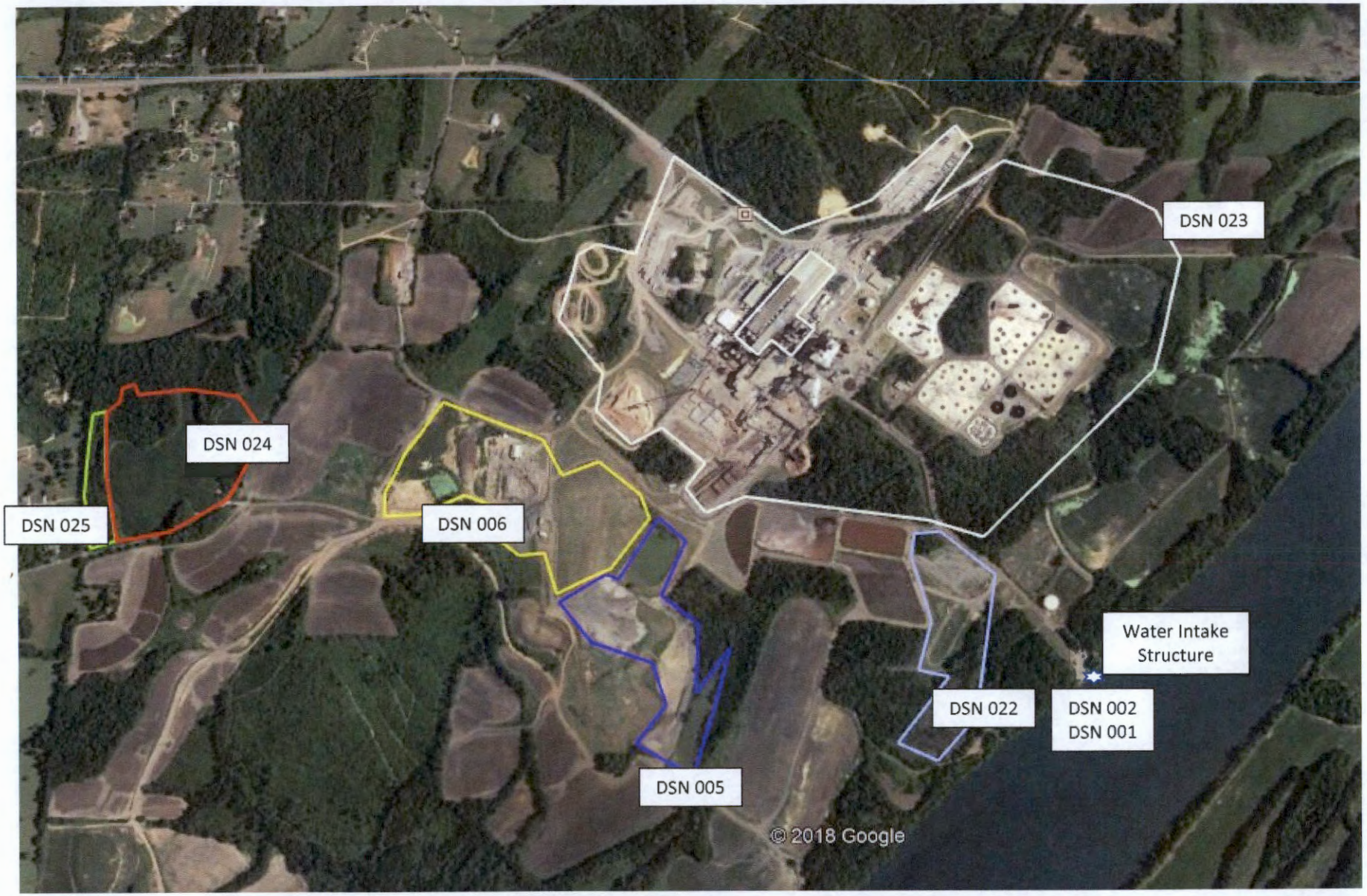
1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
Not Applicable	***NA***	***NA***	***NA***	***NA***	***NA***

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structure control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each are not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility. **See attached site drainage map.**

Continued on Page 2



Form 2F Site Drainage Map – WestRock CP, LLC

Stevenson Mill – NPDES Permit No. AL0022314

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
DSN 005	*14.7 acres*	*24.5 acres*	*DSN 023*	*44.3 acres*	*145 acres*
DSN 006	*24.1 acres*	*40.1 acres*	*DSN 024*	*25 acres*	*30 acres*
DSN 022	*0 acres*	*20 acres*	*DSN 025*	*1 acre*	*5 acres*

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

See attached table for narrative description of significant materials and summary of materials management practices.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
DSN 005	*Sedimentation and Discharge of Surface Water (See EPA Form 2C)*	*1-U, 4-A*
DSN 006	*Sedimentation and Discharge of Surface Water*	*1-U, 4-A*
DSN 022	*Sedimentation and Discharge of Surface Water*	*1-U, 4-A*
DSN 023	*Sedimentation and Discharge of Surface Water*	*1-U, 4-A*
DSN 024	*Sedimentation and Discharge of Surface Water*	*1-U, 4-A*
DSN 025	*Sedimentation and Discharge of Surface Water*	*1-U, 4-A*

V. Non Stormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
Darrell Daubert, General Manager	Darrell Daubert	2/25/19

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during test.

General knowledge and dry weather visual observations of storm water outfalls.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

The facility reported a release of paper machine felt wash (Solenis FB9050) to the ground on June 13, 2017. The felt wash contains sodium hydroxide at a concentration of 10-15%. Approximately 14,615 pounds of felt wash (consisting of 2,192 pounds of sodium hydroxide) were released. This release did not reach a storm water outfall. The felt wash tank has been replaced with a double-walled tank.

 Continued on Page 3

Supplement to EPA Form 2F Items IV.B and IV.C WestRock CP, LLC – Stevenson Mill (NPDES Permit No. AL0022314)						
Discharge Outfall	**Internal Outfall**	**Location**	**Area of Drainage**	**Areas Drained**	**Significant Materials Potentially Exposed to Storm Water**	**Control Measures**
DSN 006	N/A	N 34° 51' 38" W 85° 47' 42"	40.1 acres	Landfill Farmland	Sludge, Ash, Oil/Fuel, and Landfill Leachate	Silt Fence / Hay Bales
DSN 022	N/A	N 34° 51' 22" W 85° 46' 51"	20.0 acres	Sanitary WWTP Laydown Yard Farmland	Sludge, Sanitary Wastewater, Old Equipment, Oil/Fuel, and Wood Debris/Bark	Rip Rap Dam
DSN 023	003	N 34° 51' 49" W 85° 46' 42"	34.8 acres	Woodyard Wood-Fired Boilers Pulp Mill	Chips, Bark, Ash, Paper Rejects, Sludge, Process Water, Waste Paper, Whitewater, Paper Stock, and Oil/Fuel	Rip Rap Dam (Note: Bulk Chemicals and Liquids are stored in aboveground storage tanks.)
	004	N 34° 52' 05" W 85° 46' 42"	6.2 acres	Power & Recovery Fire Training Shipping	Spent Pulping and/or Cooking Liquor, Miscellaneous Chemicals, Process Water, Ash, Fire Water, Oil/Fuel, and Waste Paper	
	007	N 34° 51' 46" W 85° 47' 26"	3.6 acres	Chip Pile	Wood Chips, Bark, and Oil/Fuel	
	008	N 34° 51' 49" W 85° 47' 25"	25.3 acres	Chip Pile Mobile Equipment Shop	Wood Chips, Bark, Oil/Fuel, and Machinery	
	009	N 34° 51' 48" W 85° 47' 24"	1.2 acres	OCC Storage	Waste Paper and Oil/Fuel	
	010	N 34° 51' 46" W 85° 47' 22"	1.1 acres	OCC Storage	Waste Paper and Oil/Fuel	
	011	N 34° 51' 44" W 85° 47' 21"	4.8 acres	Woodyard OCC Storage	Bark, Wood Debris, Oil/Fuel, and Waste Paper	
	012	N 34° 51' 43" W 85° 47' 18"	2.0 acres	Woodyard	Bark, Wood Debris, and Oil/Fuel	
	013	N 34° 51' 43" W 85° 47' 15"	2.4 acres	Stacker/Reclaimer	Wood Debris and Oil/Fuel	

Supplement to EPA Form 2F Items IV.B and IV.C WestRock CP, LLC – Stevenson Mill (NPDES Permit No. AL0022314)						
Discharge Outfall	**Internal Outfall**	**Location**	**Area of Drainage**	**Areas Drained**	**Significant Materials Potentially Exposed to Storm Water**	**Control Measures**
DSN 023 (cont'd)	014	N 34° 52' 07" W 85° 47' 13"	9.5 acres	Parking Lots	Sediment and Oil/Fuel	Rip Rap Dam (Note: Bulk Chemicals and Liquids are stored in aboveground storage tanks.)
	015	N 34° 52' 06" W 85° 47' 10"	1.5 acres	Parking Lot	Sediment and Oil/Fuel	
	016	N 34° 52' 06" W 85° 47' 09"	2.9 acres	Shipping Paper Machines	Sediment and Oil/Fuel	
	017	N 34° 52' 07" W 85° 47' 07"	2.9 acres	Shipping	Sediment and Oil/Fuel	
	018	N 34° 52' 08" W 85° 47' 02"	20.0 acres	Trailer Yard	Sediment and Oil/Fuel	
	019	N 34° 52' 03" W 85° 47' 02"	3.6 acres	Shipping	Sediment, Oil/Fuel, and Rail Car Shower	
	020	N 34° 52' 04" W 85° 47' 02"	3.9 acres	Power & Recovery	Spent Pulping and/or Cooking Liquor, Miscellaneous Chemicals, Oil/Fuel, and Process Water	
	021	N 34° 52' 02" W 85° 46' 60"	2.6 acres	Power & Recovery	Spent Pulping and/or Cooking Liquor	
	023	N 34° 52' 5" W 85° 46' 20"	145 acres (total)	Laydown Yard Farmland	Wood Debris, Sludge, Old Equipment, and Oil/Fuel	
DSN 024	N/A	N 34° 51' 50" W 85° 48' 9"	30 acres	Wet Yard	Wood Debris and Oil/Fuel	Sediment Pond
DSN 025	N/A	N 34° 51' 42" W 85° 48' 24"	5 acres	Area West of Wet Yard	Wood Debris and Oil/Fuel	N/A

EPA ID Number *(copy from Item I of Form 1)*
ALD079103495

I. Discharge Information

A,B,C, & D: See instruction before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E. Potential discharges not covered by analysis - is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes *(list all such pollutants below)* ☒ No *(go to Section IX)*

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☒ Yes *(list all such pollutants below)* ☐ No *(go to Section IX)*

Biological toxicity testing data are available only for DSN 001 – See EPA Form 2C and test reports submitted annually to ADEM.

IX. Contact Analysis Information

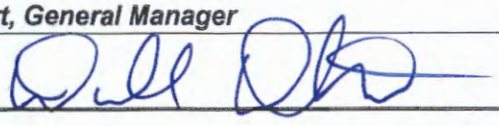
Were any of the analysis reported in item VII performed by a contact laboratory or consulting firm?

☒ Yes *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Pace Analytical	***12065 Lebanon Road Mount Juliet, TN 37122***	***(615) 758-5858***	***COD, Total Kjeldahl Nitrogen, Total Phosphorus, and Oil & Grease***

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title *(type or print)*	B. Area Code and Phone No.
Darrell Daubert, General Manager	***(256) 437-2161***
Signature 	D. Date Signed 2/25/19

EPA ID Number *(copy from Item I of Form 1)*
ALD079103495

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

I. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	**Outfall DSN 006 (From DSN 005 Analyses)** Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	***<5.8 mg/L***	***N/A***	***<5.8 mg/L***	***N/A***	***6***	***See attached table***
Biological Oxygen Demand (BOD5)	***31 mg/L***	***N/A***	***<13.2 mg/L***	***N/A***	***6***	***See attached table***
Chemical Oxygen Demand (COD)	***51.3 mg/L***	***N/A***	***51.3 mg/L***	***N/A***	***1***	***See attached table***
Total Suspended Solids (TSS)	***200 mg/L***	***N/A***	***89.5 mg/L***	***N/A***	***6***	***See attached table***
Total Kjeldahl Nitrogen	***2.20 mg/L***	***N/A***	***2.20 mg/L***	***N/A***	***1***	***See attached table***
Total Phosphorus	***0.328 mg/L[1]***	***N/A***	***0.328 mg/L***	***N/A***	***1***	***See attached table***
pH	***8.8***	***N/A***	***8.0***	***N/A***	***6***	***See attached table***

[1]Note: Total Phosphorus is not believed to be contained in this discharge because it was also detected in the method blank.

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	***See above***					***See attached table***

EPA ID Number *(copy from Item I of Form 1)*
ALD079103495

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

V. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	**Outfall DSN 022** Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	*<5.8 mg/L*	*N/A*	*<5.8 mg/L*	*N/A*	*5*	*See attached table*
Biological Oxygen Demand (BOD5)	*7.0 mg/L*	*N/A*	*6.0 mg/L*	*N/A*	*5*	*See attached table*
Chemical Oxygen Demand (COD)	*17.5 mg/L*	*N/A*	*17.5 mg/L*	*N/A*	*1*	*See attached table*
Total Suspended Solids (TSS)	*448 mg/L*	*N/A*	*145 mg/L*	*N/A*	*5*	*See attached table*
Total Kjeldahl Nitrogen	*0.64 mg/L*	*N/A*	*0.64 mg/L*	*N/A*	*1*	*See attached table*
Total Phosphorus	*<0.10 mg/L*	*N/A*	*<0.10 mg/L*	*N/A*	*1*	*See attached table*
pH	*8.4*	*N/A*	*7.4*	*N/A*	*5*	*See attached table*

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	*See above*					*See attached table*

EPA ID Number *(copy from Item I of Form 1)*
ALD079103495

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

II. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	**Outfall DSN 023** Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	***<5.8 mg/L***	***N/A***	***<5.8 mg/L***	***N/A***	***6***	***See attached table***
Biological Oxygen Demand (BOD5)	***8.0 mg/L***	***N/A***	***3.7 mg/L***	***N/A***	***6***	***See attached table***
Chemical Oxygen Demand (COD)	***17.5 mg/L***	***N/A***	***17.5 mg/L***	***N/A***	***1***	***See attached table***
Total Suspended Solids (TSS)	***80 mg/L***	***N/A***	***34 mg/L***	***N/A***	***6***	***See attached table***
Total Kjeldahl Nitrogen	***0.64 mg/L***	***N/A***	***0.64 mg/L***	***N/A***	***1***	***See attached table***
Total Phosphorus	***<0.10 mg/L***	***N/A***	***<0.10 mg/L***	***N/A***	***1***	***See attached table***
pH	***8.0***	***N/A***	***7.1***	***N/A***	***6***	***See attached table***

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	***See above***					***See attached table***

EPA ID Number *(copy from Item I of Form 1)*
ALD079103495

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

I. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	**Outfall DSN 024 (Outfall 002-1 from ALG060506)** Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	*<5.8 mg/L*	*N/A*	*<5.8 mg/L*	*N/A*	*3*	*See attached table*
Biological Oxygen Demand (BOD5)	*20 mg/L*	*N/A*	*9.7 mg/L*	*N/A*	*6*	*See attached table*
Chemical Oxygen Demand (COD)	*17.5 mg/L*	*N/A*	*17.5 mg/L*	*N/A*	*1*	*See attached table*
Total Suspended Solids (TSS)	*80 mg/L*	*N/A*	*34 mg/L*	*N/A*	*6*	*See attached table*
Total Kjeldahl Nitrogen	*0.64 mg/L*	*N/A*	*0.64 mg/L*	*N/A*	*1*	*See attached table*
Total Phosphorus	*<0.10 mg/L*	*N/A*	*<0.10 mg/L*	*N/A*	*1*	*See attached table*
pH	*8.3*	*N/A*	*6.8*	*N/A*	*6*	*See attached table*

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
OD5	*See above*					*See attached table*
pH	*See above*					*See attached table*

EPA ID Number *(copy from Item I of Form 1)*
ALD079103495

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

V. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	**Outfall DSN 025 (Outfall 001-1 from ALG060506)** Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	***<5.8 mg/L***	***N/A***	***<5.8 mg/L***	***N/A***	***3***	***See attached table***
Biological Oxygen Demand (BOD5)	***20 mg/L***	***N/A***	***9.7 mg/L***	***N/A***	***6***	***See attached table***
Chemical Oxygen Demand (COD)	***17.5 mg/L***	***N/A***	***17.5 mg/L***	***N/A***	***1***	***See attached table***
Total Suspended Solids (TSS)	***342 mg/L***	***N/A***	***254 mg/L***	***N/A***	***3***	***See attached table***
Total Kjeldahl Nitrogen	***0.64 mg/L***	***N/A***	***0.64 mg/L***	***N/A***	***1***	***See attached table***
Total Phosphorus	***<0.10 mg/L***	***N/A***	***<0.10 mg/L***	***N/A***	***1***	***See attached table***
pH	***8.1***	***N/A***	***7.9***	***N/A***	***3***	***See attached table***

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	***See above***					***See attached table***

Continued from the Front

Part C - List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
See EPA Form 2C for Outfalls DSN 001, 002 & 005						
Not Applicable for Outfalls DSN 006, DSN 022, DSN 023, DSN 024, or DSN 025						

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Total flow from rain event *(gallons or specify units)*
N/A				

7. Provide a description of the method of flow measurement or estimate.

Flows determined using rational method.

ADEM Form 187

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
NPDES INDIVIDUAL PERMIT APPLICATION
SUPPLEMENTARY INFORMATION FOR INDUSTRIAL FACILITIES

Instructions: This form should be used to submit the required supplementary information for an application for an NPDES individual permit for industrial facilities. The completed application should be submitted to ADEM in duplicate. If insufficient space is available to address any item, please continue on an attached sheet of paper. Please mark "N/A" in the appropriate box when an item is not applicable to the applicant. **Please type or print legibly in blue or black ink.** Mail the completed application to:

ADEM-Water Division
Industrial Section
P O Box 301463
Montgomery, AL 36130-1463

RECEIVED
FEB 28 2019
IND. MUN BRANCH

PURPOSE OF THIS APPLICATION

- ☐ Initial Permit Application for New Facility*
- ☐ Initial Permit Application for Existing Facility*
- ☐ Modification of Existing Permit
- ■ Reissuance of Existing Permit
- ☐ Revocation & Reissuance of Existing Permit

* *An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.*

SECTION A – GENERAL INFORMATION

1. Facility Name: WestRock CP, LLC - Stevenson Mill
   a. Operator Name: WestRock CP, LLC
   b. Is the operator identified in A.1.a, the owner of the facility? ■ Yes ☐ No
   If no, provide name and address of the operator and submit information indicating the operator's scope of responsibility for the facility.
2. NPDES Permit Number: AL 0 0 2 2 3 1 4 (not applicable if initial permit application)
3. SID Permit Number (if applicable): IU ___ ___ - ___ ___ - ___ ___ ___ ___ ___
4. NPDES General Permit Number (if applicable): ALG 0 6 0 5 0 6
5. Facility Physical Location: (**Attach a map with location marked; street, route no. or other specific identifier**)
   Street: 1611 County Road 85
   City: Stevenson County: Jackson State: Alabama Zip: 35772
   Facility Location (Front Gate): Latitude: 34.86848 degrees Longitude: -85.78737 degrees
6. Facility Mailing Address: P. O. Box 508
   City: Stevenson County: Jackson State: Alabama Zip: 35772
7. Responsible Official (as described on the last page of this application):
   Name and Title: Darrell Daubert, General Manager
   Address: 1611 County Road 85
   City: Stevenson State: Alabama Zip: 35772
   Phone Number: (256) 437-2161 Email Address: Darrell.Daubert@westrock.com
8. Designated Facility Contact:
   Name and Title: Stephen Stroud, Environmental Manager
   Phone Number: (256) 437-3507 Email Address: Stephen.Stroud@westrock.com

9. Designated Discharge Monitoring Report (DMR) Contact:

Name and Title: Angela Aten, Environmental Engineer

Phone Number: (256) 437-3305 Email Address: Angela.Aten@westrock.com

10. Type of Business Entity:

☒ Corporation ☐ General Partnership ☐ Limited Partnership ☐ Limited Liability Company ☐ Sole Proprietorship

☐ Other (Please Specify)

11. Complete this section if the Applicant's business entity is a Corporation

a) Location of Incorporation:

Address: 251 Little Falls Drive

City: Wilmington County: New Castle State: Delaware Zip: 19808

b) Parent Corporation of Applicant:

Name: WestRock Company

Address: 1000 Abernathy Road NE

City: Atlanta State: Georgia Zip: 30328

c) Subsidiary Corporation(s) of Applicant:

Name:

Address:

City: State: Zip:

d) Corporate Officers:

Name: Steve Voorhees, Chief Executive Officer

Address: 1000 Abernathy Road NE

City: Atlanta State: Georgia Zip: 30328

Name: Tom Stiger, Executive Vice President, Containerboard Mills

Address: 1000 Abernathy Road NE

City: Atlanta State: Georgia Zip: 30328

e) Agent designated by the corporation for purposes of service:

Name: Corporation Service Company Inc.

Address: 641 South Lawrence Street

City: Montgomery State: Alabama Zip: 36104

12. If the Applicant's business entity is a Partnership, please list the general partners.

Name: Name:

Address: Address:

City: State: Zip: City: State: Zip:

13. If the Applicant's business entity is a Proprietorship, please enter the proprietor's information.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

14. Permit numbers for Applicant's previously issued NPDES Permits and identification of any other State of Alabama Environmental Permits presently held by the Applicant, its parent corporation, or subsidiary corporations within the State of Alabama:

Permit Name	Permit Number	Held By
See attached list of environmental permits.		

15. Identify all Administrative Complaints, Notices of Violation, Directives, Administrative Orders, or Litigation concerning water pollution, if any, against the Applicant, its parent corporation or subsidiary corporations within the State of Alabama within the past five years (attach additional sheets if necessary):

Facility Name	Permit Number	Type of Action	Date of Action
WestRock CP, LLC - Stevenson Mill	ALR10B200	Warning Letter	April 28, 2016
WestRock CP, LLC - Abbeville Chip Mill	ALG060069	Warning Letter	February 25, 2014

SECTION B – BUSINESS ACTIVITY

1. Indicate applicable Standard Industrial Classification (SIC) Codes for all processes. If more than one applies, list in order of importance:

a. 2631

b. 2611

c. _____

d. _____

e. _____

f. _____

Attachment to EPA Form 1 Item X and ADEM Form 187 Item A.14
Environmental Permits
WestRock CP, LLC – Stevenson Mill

Type of Permit	Permit Number	Permit Held By
NPDES Individual Permit – Stevenson Mill	AL0022314	WestRock CP, LLC
NPDES General Permit – Stevenson Mill	ALG060506	WestRock CP, LLC
NPDES General Permit – Stevenson Mill	ALG141038	WestRock CP, LLC
Industrial Waste Landfill Permit – Stevenson Mill	36-06	WestRock CP, LLC
Scrap Tire License – Stevenson Mill	S0000008235	WestRock CP, LLC
Major Source Operating Permit – Stevenson Mill	705-0014	WestRock CP, LLC
ADECA Certificate of Use – Stevenson Mill	OWR-0002	WestRock CP, LLC
ADPH Radiation Permit	500	WestRock CP, LLC
Federal Communications Commission License	WQBK836	WestRock CP, LLC
Federal Communications Commission License	WQQJ448	WestRock CP, LLC

WestRock CP, LLC – Abbeville Chip Mill

Type of Permit	Permit Number	Permit Held By
NPDES General Permit – Abbeville Chip Mill	ALG060069	WestRock CP, LLC

2. If your facility conducts or will be conducting any of the processes listed below (regardless of whether they generate wastewater, waste sludge, or hazardous waste), place a check beside the category of business activity (check all that apply):

Industrial Categories

- ☐ Aluminum Forming
- ☐ Asbestos Manufacturing
- ☐ Battery Manufacturing
- ☐ Can Making
- ☐ Canned and Preserved Fruit and Vegetables
- ☐ Canned and Preserved Seafood
- ☐ Cement Manufacturing
- ☐ Centralized Waste Treatment
- ☐ Carbon Black
- ☐ Coal Mining
- ☐ Coil Coating
- ☐ Copper Forming
- ☐ Electric and Electronic Components Manufacturing
- ☐ Electroplating
- ☐ Explosives Manufacturing
- ☐ Feedlots
- ☐ Ferroalloy Manufacturing
- ☐ Fertilizer Manufacturing
- ☐ Foundries (Metal Molding and Casting)
- ☐ Glass Manufacturing
- ☐ Grain Mills
- ☐ Gum and Wood Chemicals Manufacturing
- ☐ Inorganic Chemicals
- ☐ Iron and Steel
- ☐ Leather Tanning and Finishing
- ☐ Metal Finishing
- ☐ Meat Products
- ☐ Metal Molding and Casting
- ☐ Metal Products
- ☐ Nonferrous Metals Forming
- ☐ Nonferrous Metals Manufacturing
- ☐ Oil and Gas Extraction
- ☐ Organic Chemicals Manufacturing
- ☐ Paint and Ink Formulating
- ☐ Paving and Roofing Manufacturing
- ☐ Pesticides Manufacturing
- ☐ Petroleum Refining
- ☐ Phosphate Manufacturing
- ☐ Photographic
- ☐ Pharmaceutical
- ☐ Plastic & Synthetic Materials
- ☐ Plastics Processing Manufacturing
- ☐ Porcelain Enamel
- ☒ Pulp, Paper, and Fiberboard Manufacturing
- ☐ Rubber
- ☐ Soap and Detergent Manufacturing
- ☐ Steam and Electric
- ☐ Sugar Processing
- ☐ Textile Mills
- ☐ Timber Products
- ☐ Transportation Equipment Cleaning
- ☐ Waste Combustion
- ☐ Other (specify)_____

A facility with processes inclusive in these business areas may be covered by Environmental Protection (EPA) categorical standards. These facilities are termed "categorical users" and should skip to question 2 of Section C.

3. Give a brief description of all operations at this facility including primary products or services (attach additional sheets if necessary):

WestRock CP, LLC operates an unbleached semi-chemical pulp and paperboard mill in Stevenson, Alabama. Unbleached pulp is produced by the sodium carbonate semi-chemical pulping process. Corrugated medium is manufactured from the semi-chemical pulp and recycled fiber. Process wastewater and storm water are discharged to the facility's wastewater treatment system. Additional storm water is discharged from permitted storm water outfalls.

SECTION C – WASTEWATER DISCHARGE INFORMATION

Facilities that checked activities in B.2 and are considered Categorical Industrial Users should skip to C.2 of this section.

1. **For Non-Categorical Users Only**: Provide wastewater flows for each of the processes or proposed processes. Using the process flow schematic (Figure 1), enter the description that corresponds to each process. **(The flow schematic should include all treatment units as well as monitoring and discharge points).** [New facilities should provide estimates for each discharge.]

Process Description	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow	Discharge Type (batch, continuous, intermittent)
Not Applicable			

If batch discharge occurs or will occur, indicate: [new facilities may estimate.]

a. Number of batch discharges: _____ per day

b. Average discharge per batch: _____ (GPD)

c. Time of batch discharges _____ (days of week) at _____ (hours of day)

d. Flow rate: _____ gallons/minute

e. Percent of total discharge: _____

Non-Process Discharges (e.g. non-contact cooling water)	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow

2. **Complete this Section only if you are subject to Categorical Standards and plan to directly discharge the associated wastewater to a water of the State.** If Categorical wastewater is discharged exclusively via an indirect discharge to a public or privately-owned treatment works, check "Yes" in the appropriate space below and proceed directly to part 2.c .

☐ Yes

For Categorical Users: Provide the wastewater discharge flows or production (whichever is applicable by the effluent guidelines) for each of your processes or proposed processes. Using the process flow schematic (Figure 1, pg 14), enter the description that corresponds to each process. [New facilities should provide estimates for each discharge.]

2a.

Regulated Process	Applicable Category	Applicable Subpart	Type of Discharge Flow (batch, continuous, intermittent)
Semi-Chemical Pulp & Paper	40 CFR Part 430	Subpart F (Sodium Base Mills)	Continuous
Secondary Fiber Non-Deink	40 CFR Part 430	Subpart J (Corrugating Medium)	Continuous

2b.

Process Description	Last 12 Months (gals/day), (lbs/day), etc. Highest Month Average*	Highest Flow Year of Last 5 (gals/day), (lbs/day), etc. Monthly Average*	Discharge Type (batch, continuous, intermittent)
Semi-Chemical Pulp & Paper	2,531,473 lbs/day	2,899,307 lbs/day	Continuous
Secondary Fiber Non-Deink	2,278,470 lbs/day	2,297,515 lbs/day	Continuous

*** Reported values should be expressed in units of the applicable Federal production-based standard. For example, flow (MGD), production (pounds per day), etc.**

If batch discharge occurs or will occur, indicate: [new facilities may estimate.]

a. Number of batch discharges: _____ per day

b. Average discharge per batch: _____ (GPD)

c. Time of batch discharges _____ (days of week) at _____ (hours of day)

d. Flow rate: _____ gallons/minute

e. Percent of total discharge: _____

2c.

Non categorical Process Description	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow	Discharge Type (batch, continuous, intermittent)
Not Applicable			

If batch discharge occurs or will occur, indicate: [new facilities may estimate.]

a. Number of batch discharges: _____ per day

b. Average discharge per batch: _____ (GPD)

c. Time of batch discharges _____ (days of week) at _____ (hours of day)

d. Flow rate: _____ gallons/minute

e. Percent of total discharge: _____

2d.

Non-Process Discharges (e.g. non-contact cooling water)	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow
Not Applicable		

All Applicants must complete C.3 – C.6.

3. Do you share an outfall with another facility? ☐ Yes ■ No (If no, continue to C.4)

For each shared outfall, provide the following:

Applicant's Outfall No.	Name of Other Permittee/Facility	NPDES Permit No.	Where is sample collected by Applicant?

4. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Current:	Flow Metering	■ Yes	☐ No	☐ N/A
	Sampling Equipment	■ Yes	☐ No	☐ N/A
Planned:	Flow Metering	☐ Yes	☐ No	■ N/A
	Sampling Equipment	☐ Yes	☐ No	■ N/A

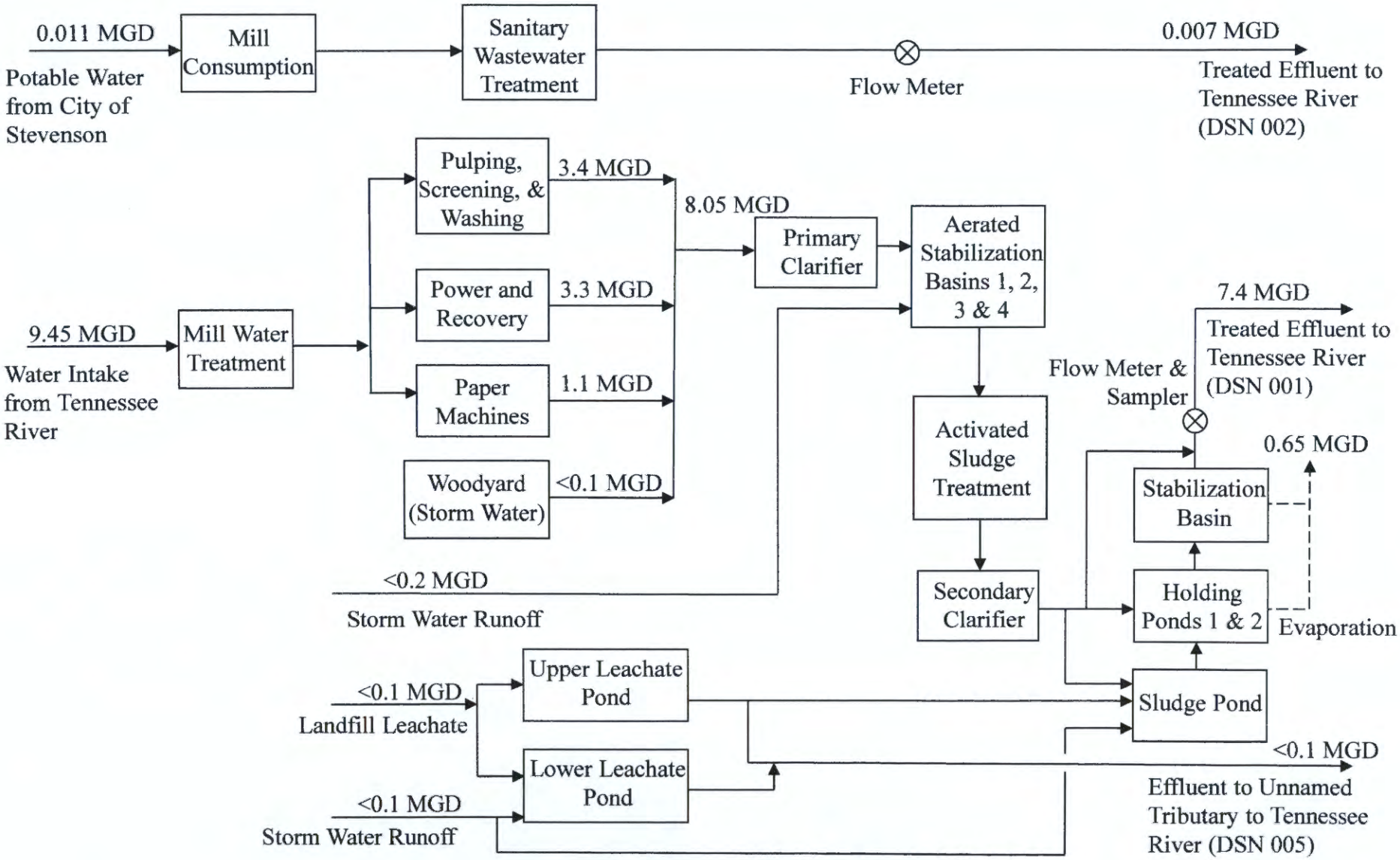
If so, please attach a schematic diagram of the sewer system indicating the present or future location of this equipment and describe the equipment below:

DSN 001 and DSN 002 outfall discharge flow is continuously measured using flow meters; DSN 001 outfall is also equipped with an ISCO sampler.

5. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics?
☐ Yes ■ No (If no, continue to C.6)

Briefly describe these changes and their anticipated effects on the wastewater volume and characteristics:

II.A. Line Drawing for WestRock CP, LLC – Stevenson Mill



6. List the trade name and chemical composition of all biocides and corrosion inhibitors used:

Trade Name	Chemical Composition
See attached list.	

For each biocide and/or corrosion inhibitor used, please include the following information:

(1) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach,
(2) quantities to be used,
(3) frequencies of use,
(4) proposed discharge concentrations, and
(5) EPA registration number, if applicable

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

☐ Private Well
☒ Surface Water
☒ Municipal Water Utility (Specify City):
☐ Other (Specify): _____

IF MORE THAN ONE WELL OR SURFACE INTAKE, PROVIDE DATA FOR EACH ON AN ATTACHMENT

City: 0.011 MGD* Well: N/A MGD* Well Depth: _____ Ft. Latitude: _____ Longitude: _____

Surface Intake Volume: 13 MGD* Intake Elevation in Relation to Bottom: 22 Ft.

Intake Elevation: 588 Ft. Latitude: 34.85780 deg Longitude: -85.77812 deg

Name of Surface Water Source: Tennessee River

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete D.1 and D.2 if your water supply is provided by an outside source and not by an onsite water intake structure? (e.g., another industry, municipality, etc...)

1. Does the provider of your source water operate a surface water intake? Yes ☐ No ☐
(If yes, continue, if no, go to Section E.)

a) Name of Provider: Not Applicable b) Location of Provider: _____

c) Latitude: _____ Longitude: _____

2. Is the provider a public water system (defined as a system which provides water to the public for human consumption or which provides only treated water, not raw water)? ☐ Yes ☐ No (If yes, go to Section E, if no, continue.)

Only to be completed if you have a cooling water intake structure or the provider of your water supply uses an intake structure and does not treat the raw water.

3. Is any water withdrawn from the source water used for cooling? ☒ Yes ☐ No

4. Using the average monthly measurements over any 12-month period, approximately what percentage of water withdrawn is used exclusively for cooling purposes? 6.9 %

5. Does the cooling water consist of treated effluent that would otherwise be discharged? ☐ Yes ☒ No
(If yes, go to Section E, if no, complete D.6 – D.17)

6. a. Is the cooling water used in a once-through cooling system? ☐ Yes ☒ No

b. Is the cooling water used in a closed cycle cooling system? ☒ Yes ☐ No

Attachment to Form 187 Item C.6 – Biocides and Corrosion Inhibitors Used by WestRock CP, LLC's Stevenson Mill NPDES Permit No. AL0022314

Product Name	Product Type	96-Hour Median Tolerance Limit	Quantity To Be Used	Frequency of Use	Proposed Discharge Concentration	EPA Registration Number
ChemTreat CL781C (Zinc Chloride, Phosphoric Acid)	Corrosion Inhibitor	23 mg/L	212 lbs/day	Continuous	3.5 mg/L	Not Registered
ChemTreat CL2150 (2-Methyl-4-Isothiazolin-3-one, and 5-Chloro-2-Methyl-4-Isothiazolin-3-one)	Biocide	12.6 mg/L	9.45 lbs/day	Continuous	<0.2 mg/L	15300-24
Quadrasperse CL4800 (Polycarboxylate, sodium salt)	Corrosion Inhibitor	>1,000 mg/L	16.4 lbs/day	Continuous	<0.3 mg/L	Not Registered
Quadrasperse CL4855 (2-Phosphono-1,2,4-Butanetricarboxylic Acid, sodium salt, and aromatic azole)	Corrosion Inhibitor	5,359 mg/L	8.6 lbs/day	Continuous	<0.2 mg/L	Not Registered
PureMax (Sodium Chlorate and Hydrogen Peroxide)	Biocide	Not provided by SDS	269 lbs/day	Continuous	<0.05 mg/L	88341-3
Sodium Hypochlorite (Sodium Hypochlorite, Sodium Hydroxide)	Biocide	0.038-0.065 mg/L	829 lbs/day	Continuous	<0.05 mg/L	266-20001

7. When was the intake installed? 1974
(Please provide dates for all major construction/installation of intake components including screens)

8. What is the maximum intake volume? 13,000,000
(maximum pumping capacity in gallons per day)

9. What is the average intake volume? 9,450,000
(average intake pump rate in gallons per day average in any 30-day period)

10. What is the actual intake flow (AIF) as defined in 40 CFR §125.92(a)? 9.45 MGD

11. How is the intake operated? (e.g., continuously, intermittently, batch) Continuously

12. What is the mesh size of the screen on your intake? 3/8-inch square

13. What is the intake screen flow-through area? 28.7 square feet

14. What is the through-screen design intake flow velocity? 0.70 ft/sec

15. What is the through-screen actual velocity (in ft/sec)? 0.50 ft/sec

16. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) Rotating mechanical screen

17. Do you have any additional fish detraction technology on your intake? ☐ Yes ■ No

18. Have there been any studies to determine the impact of the intake on aquatic organisms? ☐ Yes ■ No (If yes, please provide.)

19. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

Provide a description of the location of all sites involved in the storage of solids or liquids that could be accidentally discharged to a water of the state, either directly or indirectly via such avenues as storm water drainage, municipal wastewater systems, etc., which are located at the facility for which the NPDES application is being made. Where possible, the location should be noted on a map and included with this application:

Description of Waste	Description of Storage Location
Pulp, Raw Materials, Cooking Liquors, OCC Rejects	Storage tanks and piles located within drainage area of
	DSN 001 (runoff is treated in wastewater treatment system)

Provide a description of the location of the ultimate disposal sites of solid or liquid waste by-products (such as sludges) from any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*
Primary Sludge	95,000	Land applied on site or burned in boiler
Secondary Sludge	100,000	Land applied on site or burned in boiler

***Indicate which wastes identified above are disposed of at an off-site treatment facility and which are disposed of on-site. If any wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility.**

SECTION F – COASTAL ZONE INFORMATION

Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County? ☐ Yes ■ No

If yes, complete items F.1 – F.12:

	Yes	No
1. Does the project require new construction?	☐	☐
2. Will the project be a source of new air emissions?	☐	☐

		Yes	No
3.	Does the project involve dredging and/or filling of a wetland area or water way?	☐	☐
	If Yes, has the Corps of Engineers (COE) permit been received?	☐	☐
	COE Project No. _____		
4.	Does the project involve wetlands and/or submersed grassbeds?	☐	☐
5.	Are oyster reefs located near the project site?	☐	☐
	If Yes, include a map showing project and discharge location with respect to oyster reefs		
6.	Does the project involve the site development, construction and operation of an energy facility as defined in ADEM Admin. Code r. 335-8-1-.02(bb)?	☐	☐
7.	Does the project involve mitigation of shoreline or coastal area erosion?	☐	☐
8.	Does the project involve construction on beaches or dune areas?	☐	☐
9.	Will the project interfere with public access to coastal waters?	☐	☐
10.	Does the project lie within the 100-year floodplain?	☐	☐
11.	Does the project involve the registration, sale, use, or application of pesticides?	☐	☐
12.	Does the project propose or require construction of a new well or to alter an existing groundwater well to pump more than 50 gallons per day (GPD)?	☐	☐
	If yes, has the applicable permit for groundwater recovery or for groundwater well installation been obtained?	☐	☐

SECTION G – ANTI-DEGRADATION EVALUATION

In accordance with 40 CFR §131.12 and the ADEM Admin. Code r. 335-6-10-.04 for anti-degradation, the following information must be provided, if applicable. It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity. If further information is required to make this demonstration, attach additional sheets to the application.

1. Is this a new or increased discharge that began after April 3, 1991? ☐ Yes ■ No
   If yes, complete G.2 below. If no, go to Section H.

2. Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced in G.1? ☐ Yes ☐ No

   If yes, do not complete this section. If no, and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete G.2.A – G.2.F below and ADEM Forms 311 and 313 (attached). ADEM Form 313 must be provided for each alternative considered technically viable.

   Information required for new or increased discharges to high quality waters:

   A. What environmental or public health problem will the discharger be correcting?

   _____

   B. How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?

   _____

   C. How much reduction in employment will the discharger be avoiding?

   _____

   D. How much additional state or local taxes will the discharger be paying?

   _____

   E. What public service to the community will the discharger be providing?

   _____

   F. What economic or social benefit will the discharger be providing to the community?

   _____

SECTION H – EPA Application Forms

All Applicants must submit EPA permit application forms. More than one application form may be required from a facility depending on the number and types of discharges or outfalls found. The EPA application forms are found on the Department's website at http://www.adem.alabama.gov/programs/water/waterforms.cnt . The EPA application forms must be submitted in duplicate as follows:

1. All applicants must submit Form 1.
2. Applicants for existing industrial facilities (including manufacturing facilities, commercial facilities, mining activities, and silvicultural activities) which discharge process wastewater must submit Form 2C.
3. Applicants for new industrial facilities which propose to discharge process wastewater must submit Form 2D.
4. Applicants for new and existing industrial facilities which discharge only non-process wastewater (i.e., non-contact cooling water and/or sanitary wastewater) must submit Form 2E.
5. Applicants for new and existing facilities whose discharge is composed entirely of storm water associated with industrial activity must submit Form 2F, unless exempted by § 122.26(c)(1)(ii). If the discharge is composed of storm water and non-storm water, the applicant must also submit Forms 2C, 2D, and/or 2E, as appropriate (in addition to Form 2F).

SECTION I – ENGINEERING REPORT/BMP PLAN REQUIREMENTS

See ADEM 335-6-6-.08(i) & (j)

SECTION J– RECEIVING WATERS

Outfall No.	Receiving Water(s)	303(d) Segment?		Included in TMDL?*	
001	Tennessee River (AL06030001-0205-102) - Draft Only	■ Yes	☐ No	☐ Yes	■ No
002	Tennessee River (AL06030001-0205-102) - Draft Only	■ Yes	☐ No	☐ Yes	■ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

*If a TMDL Compliance Schedule is requested, the following should be attached as supporting documentation:

(1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.);

(2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be submitted as available);

(3) Requested interim limitations, if applicable;

(4) Date of final compliance with the TMDL limitations; and,

(5) Any other additional information available to support requested compliance schedule.

SECTION K – APPLICATION CERTIFICATION

The information contained in this form must be certified by a responsible official as defined in ADEM Administrative Code r. 335-6-6-.09 signatories to permit applications and reports" (see below).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible Official: _____ Date Signed: 7/25/19

Name and Title: Darrell Daubert, General Manager

If the Responsible Official signing this application is <u>not</u> identified in Section A.7, provide the following information:

Mailing Address: P. O. Box 508

City: Stevenson State: Alabama Zip: 35772

Phone Number: (256) 437-2161 Email Address: Darrell.Daubert@westrock.com

335-6-6-.09 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.

(1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:

(a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;

(b) In the case of a partnership, by a general partner;

(c) In the case of a sole proprietorship, by the proprietor; or

(d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.

Appendix B
Proposed Draft NPDES Permit

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: WESTROCK CP, LLC

FACILITY LOCATION: 1611 COUNTY ROAD 85
STEVENSON, AL 35772

PERMIT NUMBER: AL0022314

RECEIVING WATERS: DSN001 – DSN002: TENNESSEE RIVER
DSN 005, DSN006, DSN022 ~~DSN003~~ DSN0023: UNNAMED TRIBUTARY TO TENNESSEE RIVER
DSN024 - DSN025: UNNAMED TRIBUTARY TO BENGIS CREEK

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE: AUGUST 29, ~~2014~~ 2019

EFFECTIVE DATE: SEPTEMBER 1, ~~2014~~ 2019

EXPIRATION DATE: AUGUST 31, ~~2018~~ 2024

~~MODIFICATION ISSUED DATE: JANUARY 15, 2016~~

~~MODIFICATION EFFECTIVE DATE: JANUARY 15, 2016~~

Gregory L. Dean
Alabama Department of Environmental Management

INDUSTRIAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0011: Process wastewater from paperboard manufacturing, landfill leachate and stormwater associated with industrial activity 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Oxygen, Dissolved (DO) 4/	-	-	REPORT mg/l	-	-	3X Weekly test	Grab	-
BOD, 5-Day (20 Deg. C)	19,045 ~~1440~~ lbs/day	38,230 ~~2890~~ lbs/day	-	-	-	3X Weekly test	Composite	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	3X Weekly test	Grab	-
Solids, Total Suspended	26,515 ~~20205~~ lbs/day	53,029 ~~40410~~ lbs/day	-	-	-	3X Weekly test	Composite	-
Nitrogen, Ammonia Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Nitrogen, Kjeldahl Total (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Nitrite Plus Nitrate Total 1 Det. (As N)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October
Phosphorus, Total (As P)	-	-	-	-	REPORT mg/l	Monthly	Composite	April - October

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ See Part IV.D for Stream Monitoring Requirements.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0011 (continued): Process wastewater from paperboard manufacturing, landfill leachate and stormwater associated with industrial activity 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Continuous	Recorder	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN001T: Process wastewater from paperboard manufacturing, landfill leachate and stormwater associated with industrial activity

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Toxicity, Ceriodaphnia Acute 3/	-	0 pass(0)/fail(1)	-	-	-	Annually	Grab	-
Toxicity, Pimephales Acute 3/	-	0 pass(0)/fail(1)	-	-	-	Annually	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.C for Effluent Toxicity Requirements. 48-Hr. Acute Toxicity reported for Ceriodaphnia and Pimephales on the Discharge Monitoring Reports as Pass=0. Fail=1.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN001Y: Process wastewater from paperboard manufacturing, landfill leachate and stormwater associated with industrial activity

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Pentachlorophenol 3/	-	2.58 lbs/day	-	-	-	Annually	Grab	-
Trichlorophenol 3/	-	0.98 lbs/day	-	-	-	Annually	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ Monitoring requirements and limitations do not apply for this parameter provided that the permittee certifies annual, by January 28th, that biocides containing chlorophenolic compounds were not used. In the case that these pollutants are not used on site and certification is submitted, the permittee should report NODI=9 on the DMR for this outfall.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0021: Treated Sanitary Wastewater

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	30.0 mg/l	45.0 mg/l	Weekly	Composite	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	Weekly	Grab	-
Solids, Total Suspended	-	-	-	30.0 mg/l	45.0 mg/l	Weekly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Weekly	Instantaneous	-
Chlorine, Total Residual	-	-	-	-	1.0 mg/l	Monthly	Grab	-
E. Coli	-	-	-	126 col/100mL	235 col/100mL	Weekly	Grab	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN 0051:
~~DSN0023:~~ Leachate from solid waste landfill and storm water from landfill site 3/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Semi-Annual	Grab	-
pH	-	-	6.0 S.U.	-	9.0 S.U.	Semi-Annual	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Semi-Annual	Grab	-
Flow In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Semi-Annual	Instantaneous	-

Grab

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

DEBRIS IS DEFINED AS WOODY MATERIAL SUCH AS BARK, TWIGS, BRANCHES, HEARTWOOD, OR SAPWOOD THAT WILL NOT PASS THROUGH A 2.54 CM (1.0 INCH) DIAMETER ROUND OPENING.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ For the purposes of compliance with this permit, "Total" and "Total Recoverable" shall be considered equivalent.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

DSN0065, DSN0225, DSN0235, DSN0245, and DSN0255:

Storm Water Run-Off from Industrial activity 3/ 4/ 5/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
BOD, 5-Day (20 Deg. C)	-	-	-	-	REPORT mg/l	Semi-Annually	Grab	-
pH	-	-	REPORT S.U.	-	REPORT S.U.	Semi-Annually	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Semi-Annually	Grab	-
Oil & Grease	-	-	-	-	15 mg/l	Semi-Annually	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Semi-Annually	Estimate	-

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.

5/ Monitoring requirements only apply to the following outfalls: DSN022, DSN023, and DSN024.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit.

2. Test Procedures

For the purpose of reporting and compliance, permittees shall use one of the following procedures:

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance; however, should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.

b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures A and B above shall be reported on the permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The facility name and location, point source number, date, time and exact place of sampling;

b. The name(s) of person(s) who obtained the samples or measurements;

c. The dates and times the analyses were performed;

d. The name(s) of the person(s) who performed the analyses;

e. The analytical techniques or methods used, including source of method and method number; and

f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

5. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

a. The permittee shall conduct the required monitoring in accordance with the following schedule:

MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.

QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the quarter, i.e. (March, June, September and December DMRs).

SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the month of the semiannual period, i.e. (June and December DMRs).

ANNUAL MONITORING shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be submitted with the December DMR.

b. The permittee shall submit discharge monitoring reports (DMRs) on the forms provided by the Department and in accordance with the following schedule:

REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING shall be submitted on a **monthly** basis. The first report is due on the **28th** day of **October 2014**. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF SEMIANNUAL TESTING shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF ANNUAL TESTING shall be submitted on an annual basis. The first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

c. The Department is utilizing a web-based electronic environmental (E2) DMR reporting system for submittal of DMRs. **If the permittee is not already participating in the E2 DMR system, the permittee must apply for participation in the system within 180 days of coverage under this permit unless the facility submits in writing valid justification as to why they cannot participate and the Department approves in writing utilization of hard copy DMR submittals.** Once the permittee is enrolled in the E2 DMR system, the permittee must utilize the system for the submittal of DMRs unless otherwise allowed by this permit. To participate in the E2 DMR system, the Permittee Participation Package may be downloaded online at **https://e2.adem.alabama.gov/npdes**. If the E2 DMR system is down (i.e., electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system: this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the E2 DMR system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate

manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 DMR system resuming operation, the permittee shall enter the data into the E2 DMR system, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date). If a permittee is allowed to submit via the US Postal Service, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit. If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR form and the increased frequency shall be indicated on the DMR form. In the event no discharge from a point source identified in Provision I.A of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR form.

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules and Regulations, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

e. All Discharge Monitoring Report forms required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail containing Discharge Monitoring Reports shall be addressed to:

Alabama Department of Environmental Management
Permits and Services Division
Environmental Data Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

f. All other correspondence and reports required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

Alabama Department of Environmental Management
Water Division
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

g. If this permit is a reissuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b. above.

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

The permittee shall report to the Director, within 24-hours of becoming aware of the noncompliance, any noncompliance which may endanger health or the environment. This shall include but is not limited to the following circumstances:

(1) does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)";

(2) threatens human health or welfare, fish or aquatic life, or water quality standards;

(3) does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);

(4) contains a quantity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);

(5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and

(6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

The permittee shall orally report the occurrence and circumstances of such discharge to the Director within 24-hours after the permittee becomes aware of the occurrence of such discharge. In addition to the oral report, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c no later than five (5) days after becoming aware of the occurrence of such discharge.

b. If for any reason, the permittee's discharge does not comply with any limitation of this permit, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c below, such report shall be submitted with the next Discharge Monitoring Report required to be submitted by Part I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.

c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a copy of the Noncompliance Notification Form provided with this permit and shall include the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

(3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

3. Updating Information

a. The permittee shall inform the Director of any change in the permittee's mailing address, telephone number or in the permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules, and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

5. Cooling Water and Boiler Water Additives

a. The permittee shall notify the Director in writing not later than thirty (30) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in a cooling or boiler system, not identified in the application for this permit, from which discharge is allowed by this permit. Notification is not required for additives that do not contain a heavy metal(s) as an active ingredient and that pass through a wastewater treatment system prior to discharge nor is notification required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the permittee. Such notification shall include:

(1) name and general composition of biocide or chemical;

(2) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach;

(2) quantities to be used;

(3) frequencies of use;

(4) proposed discharge concentrations; and

(6) EPA registration number, if applicable.

b. The use of a biocide or additive containing tributyl tin, tributyl tin oxide, zinc, chromium or related compounds in cooling or boiler system(s), from which a discharge regulated by this permit occurs, is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this permit or in the application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

6. Permit Issued Based On Estimated Characteristics

a. If this permit was issued based on estimates of the characteristics of a process discharge reported on an EPA NPDES Application Form 2D (EPA Form 3510-2D), the permittee shall complete and submit an EPA NPDES Application Form 2C (EPA Form 3510-2C) no later than two years after the date that discharge begins. Sampling required for completion of the Form 2C shall occur when a discharge(s) from the process(s) causing the new or increased discharge is occurring. If this permit was issued based on estimates concerning the composition of a stormwater discharge(s), the permittee shall perform the sampling required by EPA NPDES Application Form 2F (EPA Form 3510-2F) no later than one year after the industrial activity generating the stormwater discharge has been fully initiated.

b. This permit shall be reopened if required to address any new information resulting from the completion and submittal of the Form 2C and or 2F.

E. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

2. Best Management Practices

a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.

b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.

c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Spill Prevention, Control, and Management

The permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a water of the state or a publicly or privately owned treatment works. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and which shall prevent the contamination of groundwater and such containment system shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided.

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

The permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

2. Right of Entry and Inspection

The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

a. enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;

b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and

d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in b. and c. below:

b. A bypass is not prohibited if:

(1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;

(2) It enters the same receiving stream as the permitted outfall; and

(3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and

(3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.

d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.

b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

1. Duty to Comply

a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification; or denial of a permit renewal application.

b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.

c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.

d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.

e. Nothing in this permit shall be construed to preclude and negate the permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or Local Government permits, certifications, licenses, or other approvals.

2. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.

3. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

4. Compliance with Statutes and Rules

a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.

b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE

1. Duty to Reapply or Notify of Intent to Cease Discharge

a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.

b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

b. The permittee shall notify the Director as soon as it is known or there is reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(a) one hundred micrograms per liter;

(b) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;

(c) five times the maximum concentration value reported for that pollutant in the permit application; or

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(a) five hundred micrograms per liter;

(b) one milligram per liter for antimony;

(c) ten times the maximum concentration value reported for that pollutant in the permit application.

3. Transfer of Permit

This permit may not be transferred or the name of the permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;

(2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or

(3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.

b. This permit may be modified during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;

(2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

(3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;

(4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;

(5) Errors in calculation of discharge limitations or typographical or clerical errors were made;

(6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;

(7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;

(8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;

(9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;

(10) When required by the reopener conditions in this permit;

(11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);

(12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;

(13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or

(14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Permit Termination

This permit may be terminated during its term for cause, including but not limited to, the following:

a. Violation of any term or condition of this permit;

b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;

c. Materially false or inaccurate statements or information in the permit application or the permit;

d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;

f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;

g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee; or

h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. Permit Suspension

This permit may be suspended during its term for noncompliance until the permittee has taken action(s) necessary to achieve compliance.

7. Request for Permit Action Does Not Stay Any Permit Requirement

The filing of a request by the permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term or condition.

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the permittee and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit, or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition and the permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the permittee or not identified in the application for this permit or not identified specifically in the description of an outfall in this permit is not authorized by this permit.

PART III OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

3. Permit Enforcement

a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.

b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes.

(1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

c. If the permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the permittee has made a timely and complete application for reissuance of the permit:

(1) initiate enforcement action based upon the permit which has been continued;

(2) issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(3) reissue the new permit with appropriate conditions; or

(4) take other actions authorized by these rules and AWPCA.

4. Relief from Liability

Except as provided in Provision II.C.1 (Bypass) and Provision II.C.2 (Upset), nothing in this permit shall be construed to relieve the permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

C. PROPERTY AND OTHER RIGHTS

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

D. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.

2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.

3. Construction has begun when the owner or operator has:

   a. begun, or caused to begin as part of a continuous on-site construction program:

      (1) any placement, assembly, or installation of facilities or equipment; or

      (2) significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

   b. entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.

2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.

3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

H. DEFINITIONS

1. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.

4. AWPCA - means the Alabama Water Pollution Control Act.

5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.

6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.

7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.

8. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.

9. Daily maximum - means the highest value of any individual sample result obtained during a day.

10. Daily minimum - means the lowest value of any individual sample result obtained during a day.

11. Day - means any consecutive 24-hour period.

12. Department - means the Alabama Department of Environmental Management.

13. Director - means the Director of the Department.

14. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).

15. Discharge Monitoring Report (DMR) - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.

16. DO – means dissolved oxygen.

17. 8HC – means 8-hour composite sample, including any of the following:

    a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

    b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

18. EPA - means the United States Environmental Protection Agency.

19. FC – means the pollutant parameter fecal coliform.

20. Flow – means the total volume of discharge in a 24-hour period.

21. FWPCA - means the Federal Water Pollution Control Act.

22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

26. MGD – means million gallons per day.

27. Monthly Average – means, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.

28. New Discharger – means a person, owning or operating any building, structure, facility or installation:

    a. from which there is or may be a discharge of pollutants;

    b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and

    c. which has never received a final effective NPDES permit for dischargers at that site.

29. NH3-N – means the pollutant parameter ammonia, measured as nitrogen.

30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.

31. Point source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).

32. Pollutant - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.

33. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".

34. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.

35. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".

36. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

37. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.

38. Solvent – means any virgin, used or spent organic solvent(s) identified in the F-Listed wastes (F001 through F005) specified in 40 CFR 261.31 that is used for the purpose of solubilizing other materials.

39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.

40. TON – means the pollutant parameter Total Organic Nitrogen.

41. TRC – means Total Residual Chlorine.

42. TSS – means the pollutant parameter Total Suspended Solids.

43. 24HC – means 24-hour composite sample, including any of the following:

    a. the mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;

    b. a sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or

    c. a sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

44. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

45. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.

46. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

I. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART IV ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents, or minimizes the potential for, the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Plan Content

The permittee shall prepare and implement a best management practices (BMP) plan, which shall:

a. Establish specific objectives for the control of pollutants:

(1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;

c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;

d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;

e. Prevent or minimize stormwater contact with material stored on site;

f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;

g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;

h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;

i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;

j. Provide for the disposal of all used oils, hydraulic fluids, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;

k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;

l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;

m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;

o. Be reviewed by plant engineering staff and the plant manager; and

p. Bear the signature of the plant manager.

3. Compliance Schedule

The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.

4. Department Review

a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.

b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.

c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

5. Administrative Procedures

a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.

b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.

c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.

d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

B. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

a. All stormwater samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches.

b. The total volume of stormwater discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

c. The volume may be measured using flow measuring devices, or estimated based on a modification of the Rational Method using total depth of rainfall, the size of the drainage area serving a stormwater outfall, and an estimate of the runoff coefficient of the drainage area. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

2. Stormwater Sampling

a. A grab sample, if required by this permit, shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable); and a flow-weighted composite sample, if required by this permit, shall be taken for the entire event or for the first three hours of the event.

b. All test procedures will be in accordance with part I.B. of this permit.

C. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS

1. The permittee shall perform 48-hour acute toxicity tests on the wastewater discharges required to be tested for acute toxicity by Part I of this permit.

a. Test Requirements

(1) The samples shall be diluted, using an appropriate control water, to the Instream Waste Concentration (IWC) which is 3.0 % effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 1-day, 10-year flow period.

(2) Any test where survival in the effluent concentration is less than 90% and statistically lower than the control indicates acute toxicity and constitutes noncompliance with this permit.

b. General Test Requirements:

(1) A grab sample shall be obtained for use in above biomonitoring tests. The holding time for each sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-012 or most current edition or another control water selected by the permittee and approved by the Department.

Effluent toxicity tests in which the control survival is less than 90% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.

In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.

c. Reporting Requirements:

(1) The permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).

(2) Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2. of this part, an effluent toxicity report containing the information in Section 2. shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.

d. Additional Testing Requirements:

(1) If acute toxicity is indicated (noncompliance with permit limit), the permittee shall perform four additional valid acute toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall be performed once per week and shall be performed during the first four calendar weeks following the date on which the permittee became aware of the permit noncompliance and the results of these tests shall be submitted no later than 28 days following the month in which the tests were performed.

(2) After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.).

e. Test Methods:

(1) The tests shall be performed in accordance with the latest edition of the "EPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" and shall be performed using the fathead minnow (*Pimephales promelas*) and the cladoceran (*Ceriodaphnia dubia*).

2. Effluent toxicity testing reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate this requirement or may increase or decrease the frequency of submittals.

a. Introduction

(1) Facility Name, location and county

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

(5) Contract laboratory information (if tests are performed under contract)

(a) Name of firm

(b) Telephone number

(c) Address

(6) Objective of test

b. Plant Operations

(1) Discharge operating schedule (if other than continuous)

(2) Volume of discharge during sample collection to include Mean daily discharge on sample collection date (MGD, CFS, GPM)

(3) Design flow of treatment facility at time of sampling

c. Source of Effluent and Dilution Water

(1) Effluent samples

(a) Sampling point

(b) Sample collection dates and times (to include composite sample start and finish times)

(c) Sample collection method

(d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)

(e) Sample temperature when received at the laboratory

(f) Lapsed time from sample collection to delivery

(g) Lapsed time from sample collection to test intiation

(2) Dilution Water Samples

(a) Source

(b) Collection date(s) and time(s) (where applicable)

(c) Pretreatment

(d) Physical and chemical characteristics (pH, hardness, water temperature, alkalinity, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

(3) Deviations from referenced method, if any, and reason(s)

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

(10) Test temperature, pH and dissolved oxygen as recommended by the method (to include ranges)

(11) Feeding frequency, and amount and type of food

(12) Light intensity (mean)

e. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

(4) Disease treatment (if applicable)

f. Quality Assurance

(1) Reference toxicant utilized and source

(2) Date and time of most recent acute reference toxicant test(s), raw data, and current cusum chart(s)

(3) Dilution water utilized in reference toxicant test

(4) Results of reference toxicant test(s) (LC50, etc.), report concentration-response relationship and evaluate test sensitivity. The most recent reference toxicant test shall be conducted within 30-days of the routine.

(5) Physical and chemical methods utilized

g. Results

(1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate

(2) Provide table of endpoints: LC50, NOAEC, Pass/Fail (as required in the applicable NPDES permit)

(3) Indicate statistical methods used to calculate endpoints

(4) Provide all physical and chemical data required by method

(5) Results of test(s) (LC50, NOAEC, Pass/Fail, etc.), report concentration-response relationship **(definitive test only)**, report percent minimum significant difference (PMSD).

h. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Action to be taken

1/ Adapted from "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", Fifth Edition, October 2002 (EPA 821-R-02-012), Section 12, Report Preparation

D. STREAM MONITORING

1. Between ~~May~~ July 1st and September 30th, stream monitoring in the Tennessee River shall be performed on a once per two week basis; **unless**, the in-stream dissolved oxygen concentration at Tennessee River mile 405.7 (@ powerline crossing) is 6.0 mg/l or greater, then the subject bi-weekly monitoring is not required. Monitoring stations shall be at the Tennessee River miles 405.7 (@ powerline crossing), 399, 395, and 387. Parameters monitored shall be dissolved oxygen, pH and water temperature at the five-foot depth in the middle of the river. The date and time samples are collected should be reported and when practicable, all measurements should be made prior to 12:00 noon.

2. The monitoring frequency shall increase to once per week should upset conditions occur at the plant or should the dissolved oxygen level at any of the Tennessee River monitoring stations downstream of the mill's discharge be less than or equal to 5.4 mg/l. The once per week monitoring should continue until the upset condition in the treatment plant is corrected and/or the dissolved oxygen concentration at all the Tennessee River monitoring stations downstream of the mill's discharge are greater than 5.4 mg/l.

3. When dissolved oxygen concentrations upstream of the mill discharge are less than or equal to 5.0 mg/l and the mill is discharging, stream monitoring shall be conducted three days per week to ensure that mill's discharge isn't having a negative impact on dissolved oxygen concentrations in the Tennessee River. Parameters monitoring shall be dissolved oxygen, pH, and water temperature at the five-foot depth in the middle of the river. The date and time the samples are collected should be reported and when practicable all measurements should be made prior to 12:00 noon. Monitoring reports are due on a monthly basis. The data should be submitted to the Department in a format approved by the Department.

E. LAND APPLICATION REQUIREMENTS AND GROUNDWATER MONITORING

1. Land Application Operation Requirements

During the period beginning the effective date of this permit and lasting through the expiration date of this permit, the permittee is hereby authorized to land apply paper mill process wastewater, primary, and secondary sludge and wood waste boiler ash sludge to the permittee's fields numbered 1, 2, 3, 4, 6, 7a, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 24, 25, 26, 27, 28, 30, 31, 32, 33, and 34 in accordance with the following conditions, limitations, and monitoring requirements.

a. Sludge shall be applied at a rate no greater than 100 dry ton/acre/year.

b. Sludge application, on a field which is all or in part in a 100 year floodplan, shall be limited to:

(1) Surface application with plowing or disking of application area within 24to 48 hours

c. Spray application of sludge shall be limited to:

(1) Fields with less than 10% slope
(2) Fields not all or in part in the 100 year floodplain
(3) Days without periods of rain and/or high winds which could carry the applied wastes offsite

d. Surface application of sludge shall be limited to:

(1) Days without heavy rainfall that could carry sludge offsite
(2) Fields with less than 10% slope, unless sludge is plowed or disked into soil daily.
(3) Fields that will be cropped during the next appropriate growing season.

e. Subsurface application of sludge shall be limimited to fields that will be cropped during the next appropriate growing season.

f. Best management practices erosion control measures shall be implemented to minimize soil loss.

g. All spray/injection equipment and monitoring provisions shall be properly operated and maintained at all times to prevent leaks and spills.

h. The permittee shall perform annual monitoring of a representative sample of the material to be land applied. Parameters to be tested are Total Solids, TKN, Nitrates + Nitrites, Total Calcium, Total Magnesium, Total Sodium,

Total Potassium, Total Barium, Total Cadmium, Total Copper, Total Lead, Total Manganese, Total Nickel, Total Zinc, Chlorides, Total Dissolved Solids, Total Sulfates, pH, and Sediment Sample (Dry Weight). Land application monitoring results obtained during the previous year shall be summarized on a form approved by the Department, and submitted to the Department no later than the 28th day of January following this monitoring period. As a minimum, the following records shall be maintained by the Permittee and will be subject to inspection by the Department.

(1) All information required by land application monitoring reports;
(2) Field, date, and time span of application and volume applied;
(3) Field, date, quantity and type of fertilizer applied;
(4) Date and amount of rainfall.

i. The permittee shall take necessary measures to ensure that sludge and/or runoff from the application fields does not enter a water of the state.

j. The permittee shall perform annual analysis of groundwater monitoring wells 1 through 25. Parameters to be tested are Conductivity, Sulfate, pH, Nitrates + Nitrites, Total Phosphorus, Total Potassium, Total Barium, Total Cadmium, Total Chromium, Total Copper, Total Lead, Total Nickel, Total Zinc, Chlorides, Total Dissolved Solids, and water level. Results of this testing shall be submitted to the Department no later than the 28th of January of the following year. The results shall be submitted in report form and shall include the following:

(1) The nature and the extent of groundwater contamination (if any). Include contour maps showing the groundwater flow direction;
(2) Discussion of all analytical results;
(3) Discussion of concentration trends in each monitoring well;
(4) All potentiometric data collected during each monitoring event including top casing elevations, measured water level, total well depths, and calculated groundwater elevations;
(5) A potentiometric map illustrating the groundwater flow direction for each monitoring event;
(6) All field parameter data collected during the well purging activities;
(7) The specific dates that the groundwater sampling activities were conducted; and
(8) The report shall be prepared by and bear the signature and the license number of a licensed professional geologist or professional engineer registered in the State of Alabama.

F. COOLING WATER INTAKE STRUCTURE (CWIS) REQUIREMENTS

Section 316(b) of the Clean Water Act requires that facilities minimize adverse environmental impacts resulting from the operations of cooling water intake structure (CWIS) by using the "Best Technology Available" (BTA). All of those facilities including those not specifically addressed by rules, must be evaluated for 316(b) compliance. For those facilities not addressed in the Phase I, II, or III rules, a BTA determination must be made using "Best Professional Judgment" (BPJ) under the authority of 40 CFR 125.90(b) and 401.14.

The cooling water intake structure (CWIS) used by the permittee ahs been evaluated using available information. At this time,t he Department has determined that the cooling water intake structure represents the best technology available (BTA) to minimize adverse environmental impact in accordance with Section 316(b) of the Federal Clean Water Act (33 U.S.C. section 1326).

Clarified Cooling Water Intake Requirements

1. The permittee shall submit the following information at least 180 days prior to permit expiration of this permit:
   - Design intake flow of the CWIS;
   - Percentage of intake flow, based on highest monthly average in last 5 years, used for cooling purposes;
   - An estimate of the intake flow reduction at the facility based up the use of a 100 percent (or some lesser percentage) closed-cycle re-circulating cooling water system compared to a conventional once-through cooling water system;
   - Through screen design intake flow velocity;
   - Any impingement and entrainment data that may have been collected based on the operation of the facility's CWIS, collected since the effective date of this NPDES permit; and,
   - A detailed description of any changes in the operation of the CWIS, or changes in the type of technologies used at the CWIS such as screens or other technologies affecting the rates of impingement and/or entrainment of fish and shellfish.

2. The permitte is required to operate and maintain the CWIS in a manner that minimized impingement and entrainment levels. Documentation detailing the steps that have been and are being taken to minimize the impingement and entrainment levels shall be maintained on site and made available upon request. Typical activities that may satisfy this requirement include but are not limited to:

   - Routine inspection, maintenance, and replacement prior to the end of the useful service life of mechanical equipment associated with the CWIS;
   - Underwater inspection of critical components required to maintain functionality and biological effectiveness;

- Velocity monitoring and maintaining or achieving an intake velocity of less than 0.5 ft/s at least 90% of the calendar year;
- Intake flow monitoring such that a velocity of 0.5 ft/s is not exceeded in the intake channel at least 90% of the calendar year based on calculations;
- Use of an exclusion barrier to reduce intake velocity to less than 0.5 ft/s.