



Summary Page

Name of Facility King America Finishing, Inc.

NPDES Permit No. GA0003280

This permit is a reissuance of an extended NPDES permit for King America Finishing, Inc. The facility is a textile mill that performs preparation (includes scouring, de-sizing, bleaching, mercerization, etc.), dyeing, finishing, and flame-retardant treatment of woven cotton and synthetic/cotton blended fabrics. A maximum of 2.770 MGD of process water, cooling water, and stormwater is discharged to the Ogeechee River in the Ogeechee River Basin. The permit expired on November 30, 2018 and became administratively extended.

The permit was placed on public notice from **XXXX to XXXXX**.

Please Note The Following Changes to the Proposed NPDES Permit From The Existing Permit

Parts I.A.1., I.A.2, and I.A.3 – Effluent Limitations and Monitoring Requirements

- Added three tiers of effluent limitations to ensure that the technology based effluent limits accurately reflect production levels without restricting facility operations.
- Modified the production-based effluent limitations for BOD₅, sulfide, total phenols, and total chromium based on updated production information.
- Modified the COD effluent limitations (*Tier 1*) from 5,500 lbs/day daily average and 11,000 lbs/day daily maximum to 5,328 lbs/day daily average and 10,656 lbs/day daily maximum based on the production-based effluent limitation guidelines.
- Reduced the monitoring frequency for TSS from 5/week to 1/week based on performance.
- Reduced the monitoring frequency for COD from 5/week to 3/week based on performance.
- Reduced the monitoring frequency for sulfide from 7/week to 3/week based on performance.
- Replaced the previously misapplied concentration-based effluent limits of 30 mg/L daily average and 45 mg/L daily maximum for TSS with report only requirements.
- Reduced the monitoring frequency for total phenols from 1/week to once every two months based on performance.
- Reduced the monitoring frequency for total chromium from 1/week to once every two months based on performance.

Summary Page

- Replaced the concentration-based effluent limits of 1.2 mg/L daily average and 2.0 mg/L daily maximum for total chromium with report only requirements due to the lack of any reasonable potential for the discharge to cause or contribute to a violation of Georgia's Water Quality Standards for chromium.
- Removed instream monitoring for total hardness as sufficient data was collected to characterize the receiving stream so that site-specific data may be used when conducting a reasonable potential analysis for hardness-dependent metals.
- Modified the ammonia mass-based effluent limits from 260 lbs/day daily average and 520 lbs/day daily maximum to 181 lbs/day daily average and 336 lbs/day based on the facility's permitted daily average flow and the concentration-based effluent limitations noted in the wasteload allocation.
- Added monthly monitoring for organic nitrogen and nitrate/nitrite per *Georgia's Plan for the Adoption of Water Quality Standards for Nutrients (2013)*.
- Reduced the monitoring frequency for total Kjeldahl nitrogen, total nitrogen, and orthophosphate from 1/week to 1/month based on best professional judgement.
- Removed monitoring requirements and effluent limit of 1.6 mg/L daily maximum for formaldehyde due to concerns over the accuracy of available analytical methods due to matrix interference. Any potential toxic effects of formaldehyde will be captured through the whole effluent toxicity testing required in the permit.
- Removed the instream limits for color of $\Delta 80$ ADMI based on information provided from a color study and permit sampling which indicated no reasonable potential for the effluent to cause or contribute to a violation of Georgia's narrative Water Quality Standard for color.
- Removed sodium monitoring based on best professional judgement as there is no numeric water quality standard for sodium to compare against. Any potential toxic effects of sodium will be captured through the whole effluent toxicity testing required in the permit.
- Removed peroxide monitoring based on best professional judgement as there is no numeric water quality standard for peroxide to compare against. Any potential toxic effects of peroxide will be captured through the whole effluent toxicity testing required in the permit.
- Removed THPC monitoring based on best professional judgement as there is no numeric water quality standard for THPC to compare against. Any potential toxic effects of THPC will be captured through the whole effluent toxicity testing required in the permit.

Summary Page

- Modified the fecal coliform effluent limits of 200 #/100mL daily average and 400 #/100mL daily maximum to include seasonal effluent limits based on demonstrated contributions of non-human sources exceeding 200 #/100mL. During the months of May through October the fecal coliform effluent limits will be 500 #/100mL daily average and 500 #/100mL daily maximum. During the months of November through April the fecal coliform effluent limits will be 1,000 #/100mL daily average and 4,000 #/100mL daily maximum.

Part I.A.4 – Surface Water Monitoring Requirements

- Removed instream formaldehyde monitoring based on best professional judgement as there is no numeric water quality standard for formaldehyde to compare against. Any potential toxic effects of formaldehyde will be captured through the instream whole effluent toxicity testing required in the permit.
- Removed instream sodium monitoring based on best professional judgement as there is no numeric water quality standard for sodium to compare against. Any potential toxic effects of sodium will be captured through the instream whole effluent toxicity testing required in the permit.
- Removed instream sulfide monitoring based on best professional judgement as there is no numeric water quality standard for sulfide to compare against. Any potential toxic effects of sulfide will be captured through the instream whole effluent toxicity testing required in the permit.
- Removed instream peroxide monitoring based on best professional judgement as there is no numeric water quality standard for peroxide to compare against. Any potential toxic effects of peroxide will be captured through the instream whole effluent toxicity testing required in the permit.
- Added a requirement that downstream specific conductance and whole effluent toxicity testing be conducted concurrently to verify that the downstream sampling location is representative of the effluent plume within the Ogeechee River.

Part III.C – Special Conditions

- Paragraphs 2 and 3 from the previous permit have been removed as they have been consolidated and expressed in Part I.A.4. Paragraphs 2 and 3 previously outlined the instream sampling requirements for the facility.
- Paragraphs 4-7 from the previous permit have been consolidated and included as paragraph 3 in this permit. Paragraphs 4-7 previously outlined effluent and instream whole effluent toxicity testing requirements.

Summary Page

- Paragraph 8-10 and 12 from the previous permit are one-time requirements that have been completed and have been removed from this permit. Paragraphs 8 and 9 previously outlined a mercury characterization study and a potential mercury minimization plan. Paragraph 10 previously included requirements for a color study. Paragraph 12 previously required Perfluorooctane sulfonate (PFOS) sampling.
- Paragraph 11 from the previous permit has been removed as the contents of the language are included in the permit's boilerplate language. Paragraph 11 previously required an annual certification outlining any change in processes or wastewater characteristics.
- Added Paragraph 2 requiring characterization a Per- and Polyfluoroalkyl Substances (PFAS) Characterization Study.
- Added language to Paragraph 3 requiring the permittee to conduct a Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE) in the event that two WET tests are failed.
- Added Paragraph 4 addressing the facility's Sludge Management Plan approved August 31, 2020.

Standard Conditions & Boilerplate Modifications

The permit boilerplate includes modified language or added language consistent with other NPDES permits.

Final Permit Determinations and Public Comments

- ☐ Final issued permit did not change from the draft permit placed on public notice.
- ☐ Public comments were received during public notice period.
- ☐ Public hearing was held.
- ☐ Final permit includes changes from the draft permit placed on public notice. See attached permit revisions and/or permit fact sheet revisions document(s)

Watershed Protection Branch

2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
404-463-1511

September 22, 2020

Mr. Christopher Thomas, Branch Chief
Permitting and Grants Branch
Water Protection Division
U.S. EPA Region IV
The Sam Nunn Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

RE: Draft Permit
King America Finishing, Inc.
NPDES Permit No. GA0003280
Screven County, Ogeechee River Basin
SIC Code: 2282 and 2299

Dear Mr. Thomas:

In accordance with the Memorandum of Agreement, we are transmitting one copy of the above-referenced draft NPDES permit, as well as additional supporting documentation.

Sincerely,



Whitney Fenwick, Acting Manager
Industrial Permitting Unit

Enclosure(s): Permit Application, Permit Fact Sheet with Appendices, Supporting Documentation; etc.

cc: E-mail to EPA Region 4 mailbox: R4NPDESPermits@epa.gov

Watershed Protection Branch

2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
404-463-1511

September 22, 2020

Mr. Gary Newman, Plant Manager
King America Finishing, Inc.
1351 Scarboro Hwy
Sylvania, Georgia 30467

RE: Draft Permit
King America Finishing, Inc.
NPDES Permit GA0003280
Screven County, Ogeechee River Basin

Dear Mr. Newman:

The Environmental Protection Division (EPD) has received your permit application to discharge treated wastewater to waters of the State of Georgia. We are processing your application and are considering the reissuance of National Pollutant Discharge Elimination System (NPDES) permit in accordance with the Georgia Water Quality Control Act and the Federal Clean Water Act.

Before EPD can issue the permit, you must post the attached public notice within five (5) days of receipt of this letter and draft permit. The public notice must be posted for 30 days at the entrance of the Screven County Courthouse and provide the same notice to the largest newspaper of general circulation in the area affected by the NPDES as a one-time news release. When deciding whether to publish in one or more newspapers, please ensure that the notice will be published in all affected jurisdictions. The cost of publishing the notice is the responsibility of the permittee.

Within ten (10) days of the publication date, please provide this office with a copy of the published notice and a letter stating where and what date the notice(s) were posted. An authorized representative of King America Finishing, Inc. should sign the letter. At the end of the 30-day public comment period, EPD will make a determination on the issuance of the permit.

Notification of New Federal E-Rule

On December 21, 2015, the U.S. Environmental Protection Agency (EPA) promulgated the NPDES Electronic Reporting Rule (E-Rule) in 40 CFR 127 to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to electronic data reporting systems (NetDMR) for NPDES permits instead of submitting written paper reports such as your Discharge Monitoring Reports (DMRs). You will be required to submit your DMR and supporting documents electronically using the NetDMR system. To learn more about NetDMR and sign up to start using the system, please review the enclosed brochure and visit us at: <http://epd.georgia.gov/netdmr/>.

Please review the attached draft permit, as it contains the proposed conditions for the final permits. If you have comments or questions concerning these draft permits, please contact Ian McDowell at 404.232.1567 or ian.mcdowell@dnr.ga.gov.

Sincerely,



Whitney Fenwick, Acting Manager
Industrial Permitting Unit

Enclosure(s): Draft Permit, Permit Fact Sheet with Appendices

CC: EPD Coastal District (Brunswick) Office – Tracy Perkins (tracy.perkins@dnr.ga.gov)
Milliken & Company Corporate Env. Dept. – Lee Slusher (lee.slusher@Milliken.com)



PUBLIC NOTICE

Notice of Application for National Pollutant Discharge Elimination System Permit to Discharge Treated Wastewater Into Waters of the State of Georgia.

The Georgia Environmental Protection Division has received a new NPDES permit application for the reissuance of an existing NPDES permit. Having reviewed such application, the Environmental Protection Division proposes to issue for a maximum term of five years the following permit subject to specific pollutant limitations and special conditions:

King America Finishing, Inc., 1351 Scarboro Hwy, Sylvania, Georgia 30467, NPDES Permit No. GA0003280, for its woven cotton and synthetic fiber finishing facility located at 1351 Scarboro Hwy, Sylvania, Georgia 30467 in Screven County. A maximum of 2.770 MGD of process water, cooling water, and stormwater is discharged to the Ogeechee River in the Ogeechee River Basin.

EPD will host a public hearing via Zoom software at 7:00 p.m. on November 17, 2020. Zoom is a free web conferencing platform that also allows participation by phone. In accordance with EPD's safety precautions regarding the COVID-19 virus, EPD encourages members of the public to participate in the public hearing via Zoom. The purpose of the public hearing is to receive comments on the draft NPDES permit for King America Finishing, Inc.

To log into the public hearing on your computer, please click this link or copy and paste it into your browser to join the meeting <https://gaepd.zoom.us/j/92365011313>

To ensure that you are ready to participate when the meeting begins, we recommend that you download Zoom in advance. Zoom can be found here: <https://zoom.us>

To dial in by phone, please call this number: 877-853-5247 (Toll-free).

The meeting ID is 923 6501 1313.

Please note that if you choose to participate by phone, your number may be visible to other meeting attendees.



The public hearing is a formal process to receive comments on the draft permit. Participants who wish to comment for the record are requested to sign in upon arrival. Hearing participants will not be subject to questions from the audience, but may be questioned by the Hearing Officer for clarification of technical points or to develop a better understanding of statements. Questions asked by participants making statements will be answered by EPD in writing at a later date. Lengthy statements or statements of a considerable technical or economic nature should be submitted in writing for the official record. During the hearing, oral statements shall be limited to three (3) minutes to allow everyone an opportunity to be heard. Comments should be confined to water quality issues.

Written comments are welcomed. To ensure their consideration, written comments should be received by close of business on **November 20, 2020**. Please address written comments to the address listed below, or via e-mail at EPDcomments@dnr.ga.gov. If you choose to e-mail your comments, please be sure to include the words "NPDES Permit Issuance – King America Finishing, Inc." in the subject line to ensure that your comments will be forwarded to the correct staff.

Individual draft permits, applications, supporting documents, and fact sheets are available on EPD's website accessible through the publicly available Georgia EPD Online System (GEOS) at: <https://geos.epd.georgia.gov/GA/GEOS/Public/GovEnt/Shared/Pages/Main/Login.aspx> by searching for Submittal No.: 301606.

A fact sheet or copy of the draft permit is available by writing the Environmental Protection Division. The permit application, draft permit, comments received, and other information are available for review at 2 MLK Jr. Drive, Suite 1152E, Atlanta, GA 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information contact: Whitney Fenwick, Wastewater Regulatory Program, phone (404) 656-2795 or e-mail whitney.fenwick@dnr.ga.gov.



National Pollutant Discharge Elimination System Permit

In accordance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the State Act; the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the Federal Act; and the Rules and Regulations promulgated pursuant to each of these Acts,

King America Finishing, Inc.
1351 Scarboro Highway
Sylvania, Georgia 30467

is issued a permit to discharge from a facility located at

1351 Scarboro Highway
Sylvania, Georgia 30467
Screven County

to receiving waters

the Ogeechee River (Outfall 001) in the Ogeechee River Basin.

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit.

This permit is issued in reliance upon the permit application signed on April 18, 2018, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on **XXXX XX, XXXX**.

This permit and the authorization to discharge shall expire at midnight **XXXX XX, XXXX**.



Richard E. Dunn, Director
Environmental Protection Division

PART I

A.1. Effluent Limitations and Monitoring Requirements

Tier 1 (Average Production of Plant 1 \leq 97,939 lbs/day)⁽¹⁾

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall number 001⁽²⁾ (32.594658, -81.747894) – Process Water, Cooling Water, and Stormwater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ⁽³⁾		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD) ⁽⁴⁾	3.1	Report	--	--	Daily	Continuous	Final Effluent
Temperature (°F)	--	See Note ⁽⁵⁾	--	--	See Note ⁽⁵⁾	See Note ⁽⁵⁾	Final Effluent
Dissolved Oxygen	--	--	--	See Note ⁽⁶⁾	See Note ⁽⁶⁾	See Note ⁽⁶⁾	Final Effluent
BOD ₅	323	646	30	60	5/Week	Composite	Final Effluent
COD	5,328	10,656	Report	Report	3/Week	Composite	Final Effluent
TSS	650	1,160	Report	Report	1/Week	Composite	Final Effluent
Sulfide	9.8	19.6	1.5	3.0	3/Week	Grab	Final Effluent
TDS	--	--	2,500	3,800	5/Week	Composite	Final Effluent
Total Phenols	4.9	9.8	Report	Report	Once Every Two Months	Grab	Final Effluent
Mercury, Total (ng/L)	--	--	See Note ⁽⁷⁾	See Note ⁽⁷⁾	2/Year	Grab	See Note ⁽⁷⁾
Chromium, Total	4.9	9.8	Report	Report	Once Every Two Months	Composite	Final Effluent
Ammonia, as N ⁽⁸⁾	181	336	7	13	Daily	Composite	Final Effluent
Total Kjeldahl Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ⁽³⁾		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Organic Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Nitrate/Nitrite ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Total Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Calculation	Final Effluent
Total Phosphorus, as P ⁽⁹⁾	--	--	Report	Report	3/Week	Composite	Final Effluent
Orthophosphate, as P ⁽⁹⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Specific Conductance (µmhos/cm)	--	--	Report	Report	Daily	Continuous	Final Effluent
Color (ADMI color value)	--	--	Report	Report	1/Week	Grab	Final Effluent
Fecal Coliform ⁽¹⁰⁾ (May – Oct.) (#/100mL)	--	--	500	500	1/Week	Grab	Final Effluent
Fecal Coliform ⁽¹⁰⁾ (Nov. – Apr.) (#/100mL)	--	--	1,000	4,000	1/Week	Grab	Final Effluent
Acute Whole Effluent Toxicity ⁽¹¹⁾ (<i>Ceriodaphnia dubia</i>)	LC ₅₀ ≥ 100% Effluent	--	--	--	2/Week	Composite	Final Effluent
Acute Whole Effluent Toxicity ⁽¹¹⁾ (<i>Pimephales promelas</i>)	LC ₅₀ ≥ 100% Effluent	--	--	--	1/Year	Composite	Final Effluent
Chronic Whole Effluent Toxicity ⁽¹¹⁾ (<i>Ceriodaphnia dubia</i>)	NOEC ≥ 8% Effluent	--	--	--	1/Month	Composite	Final Effluent
Chronic Whole Effluent Toxicity ⁽¹¹⁾ (<i>Pimephales promelas</i>)	NOEC ≥ 8% Effluent	--	--	--	1/Year	Composite	Final Effluent

The pH of the final effluent shall be continuously monitored and recorded. The continuous monitoring system shall have an alarm system that warns that the pH is approaching effluent limits. In addition to continuous monitoring, the pH of the final effluent shall be monitored by analyzing grab samples once per day, five days per week. The pH of the final effluent shall not be less than 6.0 standard units or greater than 8.0 standard units. The monthly minimum and maximum pH from each method shall be reported.

- (1) The effluent limitations and monitoring requirements established in Part I.A.1 of this permit are effective for Plant 1 monthly average production levels up to 97,939 lbs of product per day. The average daily production (lbs of product/day) for the month shall be reported with the monthly discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- (2) There shall be no discharge of floating solids or visible foam other than trace amounts.
- (3) All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- (4) See Special Conditions, Part III.C.1 of this permit.
- (5) The temperature of the final effluent shall be continuously monitored. In addition to continuous monitoring, the temperature of the final effluent shall be separately monitored once per day by a grab sample, five days per week. The monthly minimum and maximum temperature from each method shall be reported.
- (6) The dissolved oxygen concentration in the final effluent shall be continuously monitored. In addition to continuous monitoring, the dissolved oxygen concentration of the final effluent shall be separately monitored once per day by a grab sample, five days per week. The dissolved oxygen concentration in the final effluent shall be 5.0 mg/L or higher at all times. The monthly minimum dissolved oxygen concentration from each method shall be reported.
- (7) The concentration of mercury in the final effluent shall not exceed 6.0 ng/L or a concentration equal to the concentration of mercury in the source water; whichever is greater. The permittee shall concurrently monitor the final effluent and source water using EPA Method 1631E to quantify the amount of mercury present in each. The detection limit for this method shall be no higher than 0.5 ng/L.
- (8) Ammonia, as N; total Kjeldahl nitrogen; organic nitrogen; nitrate/nitrite; and total nitrogen shall be analyzed or calculated from the same effluent sample on the same day.
- (9) Total phosphorus and orthophosphate shall be analyzed from the same effluent sample on the same day.
- (10) Fecal coliform bacteria shall be reported as the geometric mean of the values for samples collected during the month.
- (11) See Special Conditions, Part III.C.3 of this permit.

A.2. Effluent Limitations and Monitoring Requirements

Tier 2 (97,939 < Average Production of Plant 1 ≤ 111,849 lbs/day)⁽¹⁾

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall number 001⁽²⁾ (32.594658, -81.747894) – Process Water, Cooling Water, and Stormwater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ⁽³⁾		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD) ⁽⁴⁾	3.1	Report	--	--	Daily	Continuous	Final Effluent
Temperature (°F)	--	See Note ⁽⁵⁾	--	--	See Note ⁽⁵⁾	See Note ⁽⁵⁾	Final Effluent
Dissolved Oxygen	--	--	--	See Note ⁽⁶⁾	See Note ⁽⁶⁾	See Note ⁽⁶⁾	Final Effluent
BOD ₅	369	738	30	60	5/Week	Composite	Final Effluent
COD	5,500	11,000	Report	Report	3/Week	Composite	Final Effluent
TSS	650	1,160	Report	Report	1/Week	Composite	Final Effluent
Sulfide	11.2	22.4	1.5	3.0	3/Week	Grab	Final Effluent
TDS	--	--	2,500	3,800	5/Week	Composite	Final Effluent
Total Phenols	5.6	11.2	Report	Report	Once Every Two Months	Grab	Final Effluent
Mercury, Total (ng/L)	--	--	See Note ⁽⁷⁾	See Note ⁽⁷⁾	2/Year	Grab	See Note ⁽⁷⁾
Chromium, Total	5.6	11.2	Report	Report	Once Every Two Months	Composite	Final Effluent
Ammonia, as N ⁽⁸⁾	181	336	7	13	Daily	Composite	Final Effluent
Total Kjeldahl Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Organic Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ⁽³⁾		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Nitrate/Nitrite ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Total Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Calculation	Final Effluent
Total Phosphorus, as P ⁽⁹⁾	--	--	Report	Report	3/Week	Composite	Final Effluent
Orthophosphate, as P ⁽⁹⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Specific Conductance (µmhos/cm)	--	--	Report	Report	Daily	Continuous	Final Effluent
Color (ADMI color value)	--	--	Report	Report	1/Week	Grab	Final Effluent
Fecal Coliform ⁽¹⁰⁾ (May – Oct.) (#/100mL)	--	--	500	500	1/Week	Grab	Final Effluent
Fecal Coliform ⁽¹⁰⁾ (Nov. – Apr.) (#/100mL)	--	--	1,000	4,000	1/Week	Grab	Final Effluent
Acute Whole Effluent Toxicity ⁽¹¹⁾ (<i>Ceriodaphnia dubia</i>)	LC ₅₀ ≥ 100% Effluent	--	--	--	2/Week	Composite	Final Effluent
Acute Whole Effluent Toxicity ⁽¹¹⁾ (<i>Pimephales promelas</i>)	LC ₅₀ ≥ 100% Effluent	--	--	--	1/Year	Composite	Final Effluent
Chronic Whole Effluent Toxicity ⁽¹¹⁾ (<i>Ceriodaphnia dubia</i>)	NOEC ≥ 8% Effluent	--	--	--	1/Month	Composite	Final Effluent
Chronic Whole Effluent Toxicity ⁽¹¹⁾ (<i>Pimephales promelas</i>)	NOEC ≥ 8% Effluent	--	--	--	1/Year	Composite	Final Effluent

The pH of the final effluent shall be continuously monitored and recorded. The continuous monitoring system shall have an alarm system that warns that the pH is approaching effluent limits. In addition to continuous monitoring, the pH of the final effluent shall be monitored by analyzing grab samples once per day, five days per week. The pH of the final effluent shall not be less than 6.0 standard units or greater than 8.0 standard units. The monthly minimum and maximum pH from each method shall be reported.

- (1) The effluent limitations and monitoring requirements established in Part I.A.1 of this permit are effective for Plant 1 monthly average production levels greater than 97,939 lbs of product per day but less than 111,849 lbs of product per day. The average daily production (lbs of product/day) for the month shall be reported with the monthly discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- (2) There shall be no discharge of floating solids or visible foam other than trace amounts.
- (3) All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- (4) See Special Conditions, Part III.C.1 of this permit.
- (5) The temperature of the final effluent shall be continuously monitored. In addition to continuous monitoring, the temperature of the final effluent shall be separately monitored once per day by a grab sample, five days per week. The monthly minimum and maximum temperature from each method shall be reported.
- (6) The dissolved oxygen concentration in the final effluent shall be continuously monitored. In addition to continuous monitoring, the dissolved oxygen concentration of the final effluent shall be separately monitored once per day by a grab sample, five days per week. The dissolved oxygen concentration in the final effluent shall be 5.0 mg/L or higher at all times. The monthly minimum dissolved oxygen concentration from each method shall be reported.
- (7) The concentration of mercury in the final effluent shall not exceed 6.0 ng/L or a concentration equal to the concentration of mercury in the source water; whichever is greater. The permittee shall concurrently monitor the final effluent and source water using EPA Method 1631E to quantify the amount of mercury present in each. The detection limit for this method shall be no higher than 0.5 ng/L.
- (8) Ammonia, as N; total Kjeldahl nitrogen; organic nitrogen; nitrate/nitrite; and total nitrogen shall be analyzed or calculated from the same effluent sample on the same day.
- (9) Total phosphorus and orthophosphate shall be analyzed from the same effluent sample on the same day.
- (10) Fecal coliform bacteria shall be reported as the geometric mean of the values for samples collected during the month.
- (11) See Special Conditions, Part III.C.3 of this permit.

A.3. Effluent Limitations and Monitoring Requirements

Tier 3 (111,849 < Average Production of Plant 1 ≤ 128,116 lbs/day)⁽¹⁾

During the period specified on the first page of this permit, the permittee is authorized to discharge from outfall number 001⁽²⁾ (32.594658, -81.747894) – Process Water, Cooling Water, and Stormwater.

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

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ⁽³⁾		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD) ⁽⁴⁾	3.1	Report	--	--	Daily	Continuous	Final Effluent
Temperature (°F)	--	See Note ⁽⁵⁾	--	--	See Note ⁽⁵⁾	See Note ⁽⁵⁾	Final Effluent
Dissolved Oxygen	--	--	--	See Note ⁽⁶⁾	See Note ⁽⁶⁾	See Note ⁽⁶⁾	Final Effluent
BOD ₅	423	846	30	60	5/Week	Composite	Final Effluent
COD	5,500	11,000	Report	Report	3/Week	Composite	Final Effluent
TSS	650	1,160	Report	Report	1/Week	Composite	Final Effluent
Sulfide	12.8	25.6	1.5	3.0	3/Week	Grab	Final Effluent
TDS	--	--	2,500	3,800	5/Week	Composite	Final Effluent
Total Phenols	6.4	12.8	Report	Report	Once Every Two Months	Grab	Final Effluent
Mercury, Total (ng/L)	--	--	See Note ⁽⁷⁾	See Note ⁽⁷⁾	2/Year	Grab	See Note ⁽⁷⁾
Chromium, Total	6.4	12.8	Report	Report	Once Every Two Months	Composite	Final Effluent
Ammonia, as N ⁽⁸⁾	181	336	7	13	Daily	Composite	Final Effluent
Total Kjeldahl Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Organic Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent

Effluent Characteristics (Units)	Discharge Limitations				Monitoring Requirements ⁽³⁾		
	Mass Based (lbs/day)		Concentration Based (mg/L)		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Nitrate/Nitrite ⁽⁸⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Total Nitrogen ⁽⁸⁾	--	--	Report	Report	1/Month	Calculation	Final Effluent
Total Phosphorus, as P ⁽⁹⁾	--	--	Report	Report	3/Week	Composite	Final Effluent
Orthophosphate, as P ⁽⁹⁾	--	--	Report	Report	1/Month	Composite	Final Effluent
Specific Conductance (µmhos/cm)	--	--	Report	Report	Daily	Continuous	Final Effluent
Color (ADMI color value)	--	--	Report	Report	1/Week	Grab	Final Effluent
Fecal Coliform ⁽¹⁰⁾ (May – Oct.) (#/100mL)	--	--	500	500	1/Week	Grab	Final Effluent
Fecal Coliform ⁽¹⁰⁾ (Nov. – Apr.) (#/100mL)	--	--	1,000	4,000	1/Week	Grab	Final Effluent
Acute Whole Effluent Toxicity ⁽¹¹⁾ (<i>Ceriodaphnia dubia</i>)	LC ₅₀ ≥ 100% Effluent	--	--	--	2/Week	Composite	Final Effluent
Acute Whole Effluent Toxicity ⁽¹¹⁾ (<i>Pimephales promelas</i>)	LC ₅₀ ≥ 100% Effluent	--	--	--	1/Year	Composite	Final Effluent
Chronic Whole Effluent Toxicity ⁽¹¹⁾ (<i>Ceriodaphnia dubia</i>)	NOEC ≥ 8% Effluent	--	--	--	1/Month	Composite	Final Effluent
Chronic Whole Effluent Toxicity ⁽¹¹⁾ (<i>Pimephales promelas</i>)	NOEC ≥ 8% Effluent	--	--	--	1/Year	Composite	Final Effluent

The pH of the final effluent shall be continuously monitored and recorded. The continuous monitoring system shall have an alarm system that warns that the pH is approaching effluent limits. In addition to continuous monitoring, the pH of the final effluent shall be monitored by analyzing grab samples once per day, five days per week. The pH of the final effluent shall not be less than 6.0 standard units or greater than 8.0 standard units. The monthly minimum and maximum pH from each method shall be reported.

- (1) The effluent limitations and monitoring requirements established in Part I.A.1 of this permit are effective for Plant 1 monthly average production levels greater than 111,849 lbs of product per day but less than 128,116 lbs of product per day. The average daily production (lbs of product/day) for the month shall be reported with the monthly discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- (2) There shall be no discharge of floating solids or visible foam other than trace amounts.
- (3) All the parameters must be monitored, at a minimum, at the measurement frequency stated above if there is any discharge. If there is no discharge, state such in the discharge monitoring report in accordance with the reporting requirements in Part 1.D of this permit.
- (4) See Special Conditions, Part III.C.1 of this permit.
- (5) The temperature of the final effluent shall be continuously monitored. In addition to continuous monitoring, the temperature of the final effluent shall be separately monitored once per day by a grab sample, five days per week. The monthly minimum and maximum temperature from each method shall be reported.
- (6) The dissolved oxygen concentration in the final effluent shall be continuously monitored. In addition to continuous monitoring, the dissolved oxygen concentration of the final effluent shall be separately monitored once per day by a grab sample, five days per week. The dissolved oxygen concentration in the final effluent shall be 5.0 mg/L or higher at all times. The monthly minimum dissolved oxygen concentration from each method shall be reported.
- (7) The concentration of mercury in the final effluent shall not exceed 6.0 ng/L or a concentration equal to the concentration of mercury in the source water; whichever is greater. The permittee shall concurrently monitor the final effluent and source water using EPA Method 1631E to quantify the amount of mercury present in each. The detection limit for this method shall be no higher than 0.5 ng/L.
- (8) Ammonia, as N; total Kjeldahl nitrogen; organic nitrogen; nitrate/nitrite; and total nitrogen shall be analyzed or calculated from the same effluent sample on the same day.
- (9) Total phosphorus and orthophosphate shall be analyzed from the same effluent sample on the same day.
- (10) Fecal coliform bacteria shall be reported as the geometric mean of the values for samples collected during the month.
- (11) See Special Conditions, Part III.C.3 of this permit.

A.4. Surface Water Monitoring Requirements

Surface water(s) adjacent to the wastewater discharge shall be monitored. Unless otherwise stated or approved by EPD, samples shall concurrently be collected 25 feet upstream of the permittee's discharge pipe and 25 feet downstream of the permittee's discharge pipe, as marked by a post on the river bank, and at a distance of 38 feet (+/- 3 feet) from the left riverbank.

Surface water monitoring shall be conducted by the permittee as specified below:

Parameter (Units)	Measurement Frequency	Sample Type
pH (standard units)	1/Month	Grab
Temperature (°F)	1/Month	Grab
Specific Conductance ⁽¹⁾ (µmhos/cm)	1/Month	Grab
Ammonia, as N (mg/L)	1/Month	Grab
Dissolved Oxygen (mg/L)	1/Month	Grab
Acute Whole Effluent Toxicity ⁽¹⁾ (<i>Ceriodaphnia dubia</i>)	1/Quarter	Grab
Acute Whole Effluent Toxicity ⁽¹⁾⁽²⁾ (<i>Pimephales promelas</i>)	1/Year	Grab
Chronic Whole Effluent Toxicity ⁽¹⁾⁽²⁾ (<i>Ceriodaphnia dubia</i>)	1/Month	Grab

⁽¹⁾ Downstream specific conductance sampling should be conducted concurrently with the whole effluent toxicity testing and obtained from the same sample location, including depth in the water column. EPD will evaluate the data to confirm that the downstream sampling location is representative of the effluent plume within the Ogeechee River.

⁽²⁾ Instream whole effluent toxicity testing will be conducted downstream only. See Special Conditions, Part III.C.3 of this permit.

B. Monitoring

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. The permittee shall maintain a written sampling plan and schedule onsite.

2. Sampling Period

- a. Unless otherwise specified in this permit, quarterly samples shall be taken during the periods January-March, April-June, July-September, and October-December.
- b. Unless otherwise specified in this permit, semiannual samples shall be taken during the periods January-June and July-December.
- c. Unless otherwise specified in this permit, annual samples shall be taken during the period of January-December.
- d. Unless otherwise specified in this permit, "once every two months" samples shall be taken during the periods January-February, March-April, May-June, July-August, September-October, and November-December.

3. Monitoring Procedures

Analytical methods, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and methods listed in 40 CFR Part 136. The analytical method used shall be sufficiently sensitive. EPA-approved methods must be applicable to the concentration ranges of the NPDES permit samples.

4. Detection Limits

All parameters will be analyzed using the appropriate detection limits. If the results for a given sample are such that a parameter is not detected at or above the specified detection limit, a value of "NOT DETECTED" will be reported for that sample and the detection limit will also be reported.

5. 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 exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates and times the analyses were performed, and the person(s) performing the analyses;

- c. The analytical techniques or methods used;
- d. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. Such increased monitoring frequency shall also be indicated. EPD may require, by written notification, more frequent monitoring or the monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a minimum of three (3) years from the date of the sample, measurement, report or application, or longer if requested by EPD.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, 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 punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of EPD

C. Definitions

1. The "daily average" mass means the total discharge by mass during a calendar month divided by the number of days in the month that the production or commercial facility was discharging. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
2. The "daily maximum" mass means the total discharge by mass during any calendar day.
3. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
4. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
5. A "calendar day" is defined as any consecutive 24-hour period.
6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
7. "Severe property damage" means substantial physical damage to property, damage to treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that 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.
8. "EPD" as used herein means the Environmental Protection Division of the Department of Natural Resources.
9. "State Act" as used herein means the Georgia Water Quality Control Act (Official Code of Georgia Annotated; Title 12, Chapter 5, Article 2).
10. "Rules" as used herein means the Georgia Rules and Regulations for Water Quality Control.
11. The "Plant 1 average production" means the average production (lbs of product per day) of woven cotton and synthetic fibers through the processes of preparation, dyeing, and finishing. Product receiving further conditioning through Plant 2 operations such as flame-retardant treatment and bisulfite washing is not to be considered as additional production for the purposes of this permit.

D. Reporting Requirements

1. The permittee must electronically report the DMR, OMR and additional monitoring data using the web based electronic NetDMR reporting system, unless a waiver is granted by EPD.
 - a. The permittee must comply with the Federal National Pollutant Discharge Elimination System Electronic Reporting regulations in 40 CFR §127. The permittee must electronically report the DMR, OMR, and additional monitoring data using the web based electronic NetDMR reporting system online at: <https://netdmr.epa.gov/netdmr/public/home.htm>
 - b. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the DMR. The results of each sampling event shall be reported on the OMR and submitted as an attachment to the DMR.
 - c. The permittee shall submit the DMR, OMR and additional monitoring data no later than 11:59 p.m. on the 15th day of the month following the sampling period.
 - d. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.
2. No later than December 21, 2020, the permittee must electronically report the following compliance monitoring data and reports using the online web based electronic system approved by EPD, unless a waiver is granted by EPD:
 - a. Sewer Overflow/Bypass Event Reports;
 - b. Noncompliance Notification;
 - c. Other noncompliance; and
 - d. Bypass

3. Other Reports

All other reports required in this permit not listed above in Part I.D.2 or unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.

4. Other Noncompliance

All instances of noncompliance not reported under Part I.D. and Part II.A. shall be reported to EPD at the time the monitoring report is submitted.

5. Signatory Requirements

All reports, certifications, data or information submitted in compliance with this permit or requested by EPD must be signed and certified as follows:

- a. Any State or NPDES Permit Application form submitted to the EPD shall be signed as follows in accordance with the Federal Regulations, 40 C.F.R. 122.22:
 1. For a corporation, by a responsible corporate officer. A responsible corporate officer means:
 - i a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
 3. For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.
- b. All other reports or requests for information required by the permit issuing authority shall be signed by a person designated in (a) above or a duly authorized representative of such person, if:
 1. The representative so authorized is responsible for the overall operation of the facility from which the discharge originates, e.g., a plant manager, superintendent or person of equivalent responsibility;
 2. The authorization is made in writing by the person designated under (a) above; and
 3. The written authorization is submitted to the Director.
- c. Any changes in written authorization submitted to the permitting authority under (b) above which occur after the issuance of a permit shall be reported to the permitting authority by submitting a copy of a new written authorization which meets the requirements of (b) and (b.1) and (b.2) above.

- d. Any person signing any document under (a) or (b) above shall make 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 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.”

PART II

A. Management Requirements

1. Notification of Changes

- a. The permittee shall provide EPD at least 90 days advance notice of any planned physical alterations or additions to the permitted facility that meet the following criteria:
 1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b);
 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1); or
 3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. The permittee shall give at least 90 days advance notice to EPD of any planned changes to the permitted facility or activity which may result in noncompliance with permit requirements.
- c. Following the notice in paragraph a. or b. of this condition the permit may be modified. The permittee shall not make any changes, or conduct any activities, requiring notification in paragraph a. or b. of this condition without approval from EPD.
- d. The permittee shall provide at least 30 days advance notice to EPD of:
 1. any planned expansion or increase in production capacity; or
 2. any planned installation of new equipment or modification of existing processes that could increase the quantity of pollutants discharged or result in the discharge of pollutants that were not being discharged prior to the planned change

if such change was not identified in the permit application(s) upon which this permit is based and for which notice was not submitted under paragraphs a. or b. of this condition.

- e. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify EPD as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/L, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/L for acrolein and acrylonitrile, 500 µg/L for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/L antimony.
- f. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify EPD as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/L, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/L antimony.
- g. Upon the effective date of this permit, the permittee shall submit to EPD an annual certification in June of each year certifying whether or not there has been any change in processes or wastewater characteristics as described in the submitted NPDES permit application that required notification in paragraph a., b., or d. of this condition. The permittee shall also certify annually in June whether the facility has received offsite wastes or wastewater and detail any such occurrences.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide EPD with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

3. Facility Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this 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 back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to EPD at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:
 1. A description of the discharge and cause of noncompliance; and
 2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were 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 the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by EPD, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Sludge shall be disposed of in accordance with the regulations and guidelines established by EPD, the Federal Clean Water Act, and the Resource Conservation and Recovery Act (RCRA). Prior to disposal of sludge by any method other than co-disposal in an appropriate and permitted landfill, the permittee shall submit a sludge management plan to the Watershed Protection Branch of EPD for written approval. For land application of nonhazardous sludge, the permittee shall comply with the applicable criteria outlined in the most current version of EPD's "Guidelines for Land Application of Sewage Sludge (Biosolids) at Agronomic Rates" and with the State Rules, Chapter 391-3-6-.17. EPD may require more stringent control of this activity. Prior to land applying nonhazardous sludge, the permittee shall submit a sludge management plan to EPD for review and approval. Upon approval, the plan for land application will become a part of the NPDES permit upon modification of the permit.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to ensure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported (in the unit of lbs) as specified in Part I.D of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

9. Operator Certification Requirements

The person responsible for the daily operation of the wastewater treatment facility shall be a Class II biological wastewater treatment system operator, certified in accordance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Rule 43-51-6.(b).

10. Laboratory Analyst Certification Requirements

The permittee shall ensure that, when required, the person in responsible charge of the laboratory performing the analyses for determining permit compliance is certified in accordance with the Georgia Certification of Water and Wastewater Treatment Plant operators and Laboratory Analysts Act, as amended, and the Rules promulgated thereunder.

B. Responsibilities

1. Right of Entry

The permittee shall allow the Director of EPD, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a discharge source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director of EPD in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and
- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of EPD's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of EPD. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

4. Permit Modification

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

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order of the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 1. is different in conditions or more stringent than any effluent limitation in the permit; or
 2. controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

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 established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of 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 private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

The permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by EPD at least 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of EPD shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. 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.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage, in-plant transfer, process and material handling, loading and unloading operations, plant site runoff, and sludge and waste disposal.

14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the EPD Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When 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 any report to the Director, it shall promptly submit such facts and information.

16. Duty to Comply

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) and is grounds for enforcement action; for permit termination; revocation and reissuance, or modification; or for denial of a permit renewal application. Any instances of noncompliance must be reported to EPD as specified in Part I. D and Part II.A. of this permit.
- b. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. § 12-5-20 et. seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this permit, 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 punished by a fine or by imprisonment, or by both. The Georgia Water Quality Control Act (Act) also provides procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director.

17. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

PART III

A. Previous Permits

1. All previous State wastewater permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. Schedule of Compliance

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule: N/A
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, any remedial actions taken, and the probability of meeting the next scheduled requirement.

C. Special Conditions

1. Instream Waste Concentration

The permittee shall record stream flows measured at the USGS Rocky Ford gage (#02202040) at 8:00 a.m. daily. The total final effluent flow volume discharged for the following 24-hour period shall neither exceed 8% of the actual stream flow as measured at the Rocky Ford gage nor a daily average of 3.1 MGD. The stream flow recorded each day and the total final effluent flow volume discharged shall be reported in accordance with Part I.D of this permit.

2. Per- and Polyfluoroalkyl Substances (PFAS) Characterization Study

The purpose of the PFAS Characterization Study is to determine if the facility has the potential to discharge PFAS into the environment through the discharge of treated wastewater effluent or through industrial sludge disposal.

- a. Within one (1) month of the effective date of the permit, the permittee shall submit to EPD a written report characterizing all per- and polyfluoroalkyl substances (PFAS) employed by the facility. In addition, the report should include any PFAS known or believed to be present in the facility's wastewater or sludge, including any PFAS compounds found in raw materials, residual PFAS compounds from previous activities, and breakdown products.
- b. If per- and polyfluoroalkyl substances (PFAS) are employed by the facility or believed present in the facility's wastewater or sludge, then within two (2) months

of the effective date of the permit, the permittee shall perform the following sampling for all PFAS compounds identified in the written report, and for which a sufficiently sensitive method is available, and submit the results of the sampling to EPD as prescribed below:

- i. Complete two (2) representative sampling events of the influent to the wastewater treatment plant and effluent from the wastewater treatment plant prior to discharge from the permitted outfalls identified in this permit. The sampling events shall be at least 48 hours apart and the influent and effluent samples shall be taken on the same day.
- ii. Complete two (2) representative industrial sludge sampling events. The sludge samples shall be representative of the sludge leaving the facility.

In the absence of a 40 C.F.R. Part 136 approved sampling method for PFAS, the permittee shall conduct sampling in accordance with procedures outlined by EPA Region 4's Laboratory Services and Applied Science Division. The reference document for such procedures is the "Determination of Per- and Polyfluoroalkyl Substances by Liquid Chromatography Tandem Mass Spectrometry (2019) ID:LSBPROC-800-R1" or the most recently approved operating procedures document. The permittee may utilize an alternate sampling methodology, provided that the methodology is reviewed and approved by the Georgia Environmental Protection Division. At the time this permit is issued analytical test Method 533 is approved for use.

- c. Within three (3) months of the effective date of the permit, the permittee shall submit the PFAS Characterization Study Report (Report) to EPD for review summarizing the results of the samples. The Report shall include the certified laboratory reports as an attachment including the certified laboratory analytical results to EPD. The Report shall be submitted in hard copy and analytical data shall be reported using Microsoft Excel workbooks and submitted in electronic format on a universal serial bus (USB), to the address below:

Georgia Environmental Protection Division - Watershed Protection Branch
Watershed Compliance Program
Attn: Watershed Compliance Program Manager
2 Martin Luther King Jr. Drive
Suite 1152 East
Atlanta, Georgia 30334

3. Whole Effluent Toxicity (WET) Testing

- a. Acute Whole Effluent Toxicity testing of the final effluent and the Ogeechee River 25 feet downstream from the outfall pipe shall be conducted concurrently using the water flea (*Ceriodaphnia dubia*). In performing the testing, the most current U.S. EPA acute aquatic testing manual shall be followed. The reference document for this method is "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition, U.S. EPA. 821-R-02-012, October 2002" or the most recently approved edition. The LC₅₀

shall not be less than 100% effluent for the final effluent testing. Beginning with the effective date of this permit, testing shall be conducted on the final effluent with a frequency of twice per week (2/week) and instream with a frequency of once per quarter (1/quarter) and reported in accordance with Part I.D of this permit.

- b. Acute Whole Effluent Toxicity testing of the final effluent and the Ogeechee River 25 feet downstream from the outfall pipe shall be conducted concurrently using the fathead minnow (*Pimephales promelas*). In performing the testing, the most current U.S. EPA acute aquatic testing manual shall be followed. The reference document for this method is "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition, U.S. EPA 821-R-02-012, October 2002" or the most recently approved edition. The LC₅₀ shall not be less than 100% effluent for the final effluent testing. Beginning with the effective date of the permit, testing shall be conducted on both the final effluent and instream with a frequency of annually (1/year) and reported in accordance with Part I.D of this permit.
- c. Chronic Whole Effluent Toxicity testing of the final effluent and the Ogeechee River 25 feet downstream from the outfall pipe shall be conducted concurrently using the water flea (*Ceriodaphnia dubia*). In performing the testing, the most current U.S. EPA chronic aquatic testing manual shall be followed. The reference document for this method is "Short-Term Methods of Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition, U.S. EPA 821-R-02-013, October 2002" or the most recently approved edition. The No Observed Effect Concentration (NOEC) of the effluent shall be not less than 8% effluent for the final effluent testing. Beginning with the effective date of the permit, testing shall be conducted on both the final effluent and instream with a frequency of monthly (1/month) and reported in accordance with Part I.D of this permit.
- d. Chronic Whole Effluent Toxicity testing of the final effluent shall be conducted using the fathead minnow (*Pimephales promelas*). In performing the testing, the most current U.S. EPA chronic aquatic testing manual shall be followed. The reference document for this method is "Short-Term Methods of Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition, U.S. EPA 821-R-02-013, October 2002" or the most recently approved edition. The No Observed Effect Concentration (NOEC) of the effluent shall be not less than 8% effluent for the final effluent testing. Beginning with the effective date of the permit, testing shall be conducted on the final effluent with a frequency of annually (1/year) and reported in accordance with Part I.D of this permit.
- e. The facility shall submit the Whole Effluent Toxicity (WET) Testing Reports to EPD as an attachment to the DMR. If two WET tests are failed, the permittee will be required to complete a Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE) and submit the TIE/TRE to EPD no later than 6 months following the date of the second WET Test failure.

4. Approved Sludge Management Plan

- a. The permittee's approved Sludge Management Plan allows for sludge generated at the facility to be sent to a third party for further treatment and ultimate disposal.
- b. The permittee will report on an annual basis the amount of sludge sent to the third-party during the most recent calendar year. The annual report shall be submitted to EPD no later than February 19 of the following year.
- c. The permittee will maintain sludge handling records in accordance with Part I.B.7 of the Permit.
- d. The permittee will notify EPD in writing of any planned changes to the permittee's sludge use or disposal practices.

D. Biomonitoring and Toxicity Reduction Requirements

1. The permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with chapter 391-3-6-.03(5)(e) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, EPD may require the permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
 - b. Chronic biomonitoring tests;
 - c. Stream studies;
 - d. Priority pollutant analyses;
 - e. Toxicity reduction evaluations (TRE); or
 - f. Any other appropriate study.
2. EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test organisms (LC50) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply EPD with data and evidence to confirm toxicity elimination.



The Georgia Environmental Protection Division proposes to issue an NPDES permit to the applicant identified below. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to waters of the State.

Technical Contact: Ian McDowell (ian.mcdowell@dnr.ga.gov)
404-232-1567

Draft permit:

<input type="checkbox"/>	First issuance
<input type="checkbox"/>	Reissuance with no or minor modifications from previous permit
<input checked="" type="checkbox"/>	Reissuance with substantial modifications from previous permit
<input type="checkbox"/>	Modification of existing permit
<input checked="" type="checkbox"/>	Requires EPA review
<input checked="" type="checkbox"/>	Designated as a Major facility

1.0 **FACILITY INFORMATION**

1.1 NPDES Permit No.: GA0003280

1.2 Name and Address of Owner/Applicant

King America Finishing, Inc.
1351 Scarboro Highway
Sylvania, Georgia, 30467

1.3 Name and Address of Facility

King America Finishing, Inc.
1351 Scarboro Highway
Sylvania, Georgia, 30467
(Screven County)

1.4 Location and Description of the discharge (as reported by applicant)

Outfall ID	Latitude	Longitude	Receiving Waterbody
001	32° 35' 40.7688" N (32.594658)	81° 44' 52.4184" W (-81.747894)	Ogeechee River

1.5 Production Capacity

The facility has two manufacturing units, referred to as Plant 1 and Plant 2. Plant 1 is a complex manufacturing operation, as defined in 40 CFR 410.41, which performs dyeing and finishing of woven cotton and synthetic fibers. The average daily production rate over the previous permit term was 97,939 lbs/day with the highest annual average daily production of 111,849 lbs/day occurring in 2015. Daily production rates were calculated based on the number of production days, not calendar days. Approximately 28% of this production employs a natural fiber and the remaining 72% employs a natural and synthetic fiber blend. Plant 2 applies flame retardant treatment and performs other special conditioning on a portion of the product produced from Plant 1. The daily average production rate over the past five years from Plant 2 was 74,101 lbs/day.

The permittee has requested consideration of future production levels when calculating production-based technology-based limits, in anticipation that production may increase to the production rates experienced in 2011. This future production is equivalent to 128,116 lbs/day from Plant 1 and 88,162 lbs/day from Plant 2. EPD has included tiered permit limits based on production levels to ensure that technology based effluent limits accurately reflect production levels without restricting facility operations. Tiered limits have been based on the permittee's average production rate over the previous five years (Tier 1), the highest annual average production rate over the previous five years (Tier 2), and the predicted return to the 2011 production rate (Tier 3). The pollutant loading for all production tiers is within the scope of the loading previously considered and permitted and would not trigger an anti-degradation analysis.

1.6 SIC Code & Description

2282 – Yarn Texturizing, Throwing, Twisting, and Winding Mills

2299 – Textile goods, Not Elsewhere Classified

1.7 Description of Industrial Processes

The facility includes two internal manufacturing units, referred to as Plant 1 and Plant 2.

Plant 1

Plant 1 is a complex manufacturing operation which performs dyeing and finishing of woven cotton and synthetic fibers. The fibers first undergo preparation which includes singeing, desizing, heat-setting, mercerizing, bleaching, and washing. The fibers then undergo dyeing which includes dye application, dye fixation with chemicals or heat, washing, and drying. Finally, fibers undergo finishing. Finishing includes passing fabric through a finish pad, a pre-dryer and/or set of dry cans, and then a tenter house.

Plant 2

Plant 2 provides further finishing through flame retardant treatment of cotton and synthetic fabrics and special conditioning of those products. Flame-retardant treatment impregnates the fabric with a reactant chemistry and then exposes the fabric, in subsequent process steps, to reactant gases and liquids to chemically form the flame-retardant component on the fabric. After the reaction, the fabric contains unreacted

chemicals and chemical byproducts that must be removed through thorough rinsing. Fabric is then washed with bisulfite to remove excess formaldehyde and undergoes final softening.

1.8 Description of the Wastewater Treatment Facility

Wastewater at the facility receives initial screening and neutralization via sulfuric acid before entering a 4.5 million-gallon equalization basin. Wastewater is then pumped from the equalization basin to an activated sludge aeration basin for secondary treatment. Further secondary treatment is then provided via polymer addition and the use of clarifiers. Clarifiers #2 & #3 operate in parallel as the facility's main clarifiers, whilst Clarifier #1 is operated as a backup system. Wastewater from the clarifiers is subsequently passed through cloth media filters. Finally, tertiary treatment is provided through a granulated activated carbon filtration system with CO₂ neutralization before discharge to the Ogeechee River via an effluent diffuser.

Waste sludge, filter backwash, and emergency bypass are diverted to two sludge holding ponds. The facility has an ability to pump pond supernatant back into the equalization basin to prevent pond overflow in heavy rainfall events. Primary wasting operations occur at the first sludge holding pond, then water overflows to the second pond. This first pond has been dredged every year or two with the most recent dredging occurring in the Fall of 2019. The second pond has not been dredged since Milliken's involvement with the site. The sludge storage capacity of the smallest sludge pond is approximately 14.3 million pounds, which provides approximately 14.2 years of storage at the average solids wasting rate of 2,754 pounds of TSS per day. Sludge should be disposed of in an appropriate and permitted landfill, or in accordance with an EPD approved sludge management plan.

Outfall	Operation Description	Treatment Description
001	Process Water, Cooling Water, and Stormwater	Screening, Neutralization, Activated Sludge, Sedimentation, Sludge Lagoons, Cloth Media Filtration, Carbon Adsorption, Discharge to Surface Water, and Landfill

1.9 Type of Wastewater Discharge

- | | | | |
|-------------------------------------|-----------------------|-------------------------------------|------------|
| <input checked="" type="checkbox"/> | process wastewater | <input checked="" type="checkbox"/> | stormwater |
| <input type="checkbox"/> | domestic wastewater | <input checked="" type="checkbox"/> | combined |
| <input checked="" type="checkbox"/> | other (cooling water) | | |

Process wastewater, cooling water, and stormwater combine before treatment at the wastewater treatment plant.

Domestic wastewater was separated from the above wastestreams in 2015 and was diverted to a septic tank system which is covered under general permit no. GAG278093.

1.10 Characterization of Effluent Discharge as Reported by Applicant

(Please refer to the application for additional analysis)

1.10.a Outfall No. 001 – Process Water, Cooling Water, and Stormwater

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	2.770	1.580
Biochemical Oxygen Demand, 5-day (mg/L)	34	7
Total Suspended Solids (mg/L)	59	<7 ¹
Temperature, Winter (°F)	86.4	68.4
Temperature, Summer (°F)	94.5	79.5
Ammonia (mg/L)	11.8	<1.3 ⁽¹⁾
Total Phosphorus (mg/L)	54.8	27.0

⁽¹⁾ Less than signs indicate that non-detectable samples were reported, and that the method detection limit was assigned to these samples for the purposes of reporting long term averages.

2.0 APPLICABLE REGULATIONS

2.1 State Regulations

Chapter 391-3-6 of the Georgia Rules and Regulations for Water Quality Control

2.2 Federal Regulations

Source	Activity	Applicable Regulation
Industrial	Non-Process Water Discharges	40 CFR 122
		40 CFR 125
Industrial	Process Water Discharges	40 CFR 122
		40 CFR 125
		40 CFR 410

2.3 Industrial Effluent Limit Guideline(s)

Code of Federal Regulations, 40 CFR Part 410 Subpart D (Textile Mills Point Source Category: Woven Fabric Finishing Subcategory)

See Appendix A of the Fact Sheet for Applicable Federal Regulations

In 2006 King America Finishing installed two flame-retardant processing lines at the facility which performed additional fabric finishing for the facility. For ease of discussion and calculations the flame-retardant operations are considered to constitute “Plant 2”; whereas all other operations are considered to constitute “Plant 1”. It is important to note

that despite the nomenclature used, the installation of the flame-retardant processing lines occurred within the existing facility and did not create a new building, structure, or facility. Additionally, the installation did not reflect a substantially independent process than the complex manufacturing operations already performed at the facility. As such, the additional processing lines do not trigger a new source determination, as outlined in 40 CFR §122.29, and thus effluent limitations for existing sources, not new sources, are applicable.

3.0 WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. Federal Regulations 40 CFR 122.4(d) require that conditions in NPDES permits ensure compliance with the water quality standards which are composed of use classifications, numeric and or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial uses that each waterbody is expected to achieve, such as drinking water, fishing, or recreation. The numeric and narrative water quality criteria are deemed necessary to support the beneficial use classification for each water body. The antidegradation policy represents an approach to maintain and to protect various levels of water quality and uses.

3.1 Receiving Waterbody Classification and Information

Rules and Regulations of the State of Georgia 391-3-6-.03(6) – Fishing

Fishing,

Propagation of Fish, Shellfish, Game and Other Aquatic Life; secondary contact recreation in and on the water; or any other use requiring water of a lower quality.

- (i) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for water designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.
- (ii) pH: Within the range of 6.0 - 8.5.
- (iii) Bacteria:
 - 1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of

4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.

2. For waters designated as shellfish growing areas by the Georgia DNR Coastal Resources Division, the requirements will be consistent with those established by the State and Federal agencies responsible for the National Shellfish Sanitation Program. The requirements are found in National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish, 2007 Revision (or most recent version), Interstate Shellfish Sanitation Conference, U.S. Food and Drug Administration.
- (iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

3.2 Ambient Information

Outfall ID	7Q10 (cfs)	1Q10 (cfs)	Hardness (mg/L as CaCO ₃)	Annual Average Flow (cfs)	Upstream Total Suspended Solids (mg/L)
001	94	89	35	1767	Data unavailable ⁽¹⁾

⁽¹⁾ For the Reasonable Potential Analysis calculations, EPD used 10 mg/l as a conservative value.

3.3 Georgia 305(b)/303(d) List Documents

The Ogeechee River (R030602020304) from Hwy 102 to Hwy 301 is listed as not supporting the designated use.

Reach Name/ID	Reach Location/County	River Basin/ Use	Assessment/ Data Provider	Cause/ Source	Size/Unit	Category/ Priority	Notes
Ogeechee River GAR030602020304	Hwy. 102 to U.S. Hwy 301 Washington, Glascock, Jefferson, Jenkins, Emanuel, Burke	Ogeechee Fishing	Not Supporting 9,10	TWR NP	98 Miles	4a	TMDL completed TWR 2005.

3.4 Total Maximum Daily Load (TMDL)

The Ogeechee River is not supporting its designated use due to the trophic-weighted residue value of mercury in fish tissue. There was a TMDL developed for total mercury fish tissue in 2005 which is applicable to this segment of the Ogeechee River. King America Finishing is listed in this TMDL and was given a wasteload allocation of 6.0 ng/L for Total Hg and 0.05 ng/L for MeHg equivalent to their effluent discharge during TMDL development. The facility was also subject to mercury characterization and/or minimization conditions.

The previous permit included special conditions requiring a six month mercury characterization study, with an additional requirement to develop a mercury minimization plan if the characterization showed the average concentration of total mercury was greater than 6.0 ng/L. Results of the mercury characterization study showed an average concentration for total mercury of 0.73 ng/L; therefore, a minimization plan was not required and mercury monitoring was reduced to twice per year for the remainder of the permit term. To assure that average total mercury concentrations remain below the 6.0 ng/L wasteload allocation or the concentration of mercury in the source water; whichever is greater, twice per year effluent and source water monitoring has been established in this permit.

3.5 Wasteload Allocation Date (07/10/2018)

See Appendix B of the Fact Sheet

4.0 EFFLUENT LIMITS AND PERMIT CONDITIONS

4.1 Reasonable Potential Analysis (RP)

Title 40 of the Federal Code of Regulations, 40 CFR 122.44(d) requires delegated States to develop procedures for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criteria within a State water. If such reasonable potential is determined to exist, the NPDES permit must contain pollutant effluent limits and/or effluent limits for whole effluent toxicity. Georgia's Reasonable Potential Procedures are based on Georgia's Rules and Regulations for Water Quality Control (Rules), Chapter 391-3-6-.06(4)(d)5. The chemical specific and biomonitoring data and other pertinent information in EPD's files will be considered in accordance with the review procedures specified in the Rules in the evaluation of a permit application and in the evaluation of the reasonable potential for an effluent to cause an exceedance in the numeric or narrative criteria.

A Reasonable Potential Analysis was performed on the data submitted with the application and the results of those analyses are stated below in the following sections.

EPD evaluated the data provided in the application and supporting documents. If a pollutant is listed below, EPD determined it was a pollutant of concern and there may be a reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standards. If a pollutant is not listed below, EPD determined that the pollutant is not a pollutant of concern or has determined, based on the data provided in the application, there is no reasonable potential to cause or contribute to an instream violation of the GA Water Quality Standards. An example would be if the applicant reported "not detect," "below detection limit," or a value that was below the detection limit for a pollutant.

4.2 Whole Effluent Toxicity

Chronic WET testing measures the effect of wastewater on indicator organisms' growth, reproduction and survival. Effluent toxicity is predicted when the No Observable Effect Concentrations (NOEC) for a test organism is less than the facility's Instream Wastewater Concentration.

Chronic WET testing for *Ceriodaphnia dubia* was required in the previous permit for both the final effluent and the Ogeechee River 25 feet downstream of the outfall, with a monitoring frequency of once per month. Additionally, Chronic WET testing for *Pimephales promelas* was required in the previous permit for the final effluent, with a monitoring frequency of quarterly for the first year and annually thereafter. Effluent toxicity was determined when the NOEC exceeded the facility's maximum allowable IWC of 8%.

Acute WET testing measures the effect of wastewater on indicator organisms' survival. Effluent toxicity is predicted when the Lethal Concentration 50% (LC50) is greater than or equal to 100% effluent.

Acute WET testing for *Ceriodaphnia dubia* was required in the previous permit for both the final effluent and the Ogeechee River 25 feet downstream of the outfall, with monitoring frequencies of twice per week and once per month; respectively. Additionally, Acute WET testing for *Pimephales promelas* was required in the previous permit for both the final effluent and the Ogeechee River 25 feet downstream of the outfall, with a monitoring frequency of quarterly for the first year and annually thereafter.

The WET testing results over the previous permit term have been included in Appendix E of this fact sheet. Results of the WET testing showed periodic toxicity for both the Acute WET testing (14 effluent violations) and Chronic WET testing (4 effluent violations). Instream Acute WET testing (25 ft. downstream of the outfall) for *Ceriodaphnia dubia* indicated no toxicity for all 105 tests conducted even when acute toxicity was shown in the effluent. As such, the instream Acute WET testing frequency was reduced from monthly to quarterly. The monitoring frequency for all other WET tests was not altered.

4.3 Applicable Water Quality and Technology Based Effluent Limitations

Water Quality Based Effluent Limits (WQBELs)

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality standards. By analyzing the effect of a discharge on the receiving water, a permit writer could find that technology-based effluent limitations (TBELs) alone will not achieve the applicable water quality standards. In such cases, the Clean Water Act (CWA) and its implementing regulations require development of water quality-based effluent limitations (WQBELs). WQBELs help meet the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and the goal of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (*fishable/swimmable*).

WQBELs are designed to protect water quality by ensuring that water quality standards are met in the receiving water and downstream uses are protected. On the basis of the requirements of Title 40 of the *Code of Federal Regulations* (CFR) 125.3(a), additional or more stringent effluent limitations and conditions, such as WQBELs, are imposed when TBELs are not sufficient to protect water quality.

The term *pollutant* is defined in CWA section 502(6) and § 122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and § 401.16 (BOD₅, TSS, fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

Applicable Technology Based Effluent Limits (TBELs)

Technology-based effluent limitations aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and water quality-based effluent limitations. The NPDES regulations at Title 40 of the Code of Federal Regulations 125.3(a) require NPDES permit writers to develop technology-based treatment requirements, consistent with CWA section 301(b), that represent the minimum level of control that must be imposed in a permit. The regulation also indicates that permit writers must include in permits additional or more stringent effluent limitations and conditions, including those necessary to protect water quality.

For pollutants not specifically regulated by Federal Effluent Limit Guidelines, the permit writer must identify any needed technology-based effluent limitations and utilize best professional judgment to establish technology-based limits or determine other appropriate means to control its discharge if there is a reasonable potential to cause or contribute to a violation of the water quality standards.

4.4 Conventional Pollutants: Outfall 001 & Instream Discussions

Pollutants of Concern	Basis
pH	<u>WQBEL</u> The instream waste concentration is 4.86% based on the facility's permitted flow. The permit further limits the IWC to no greater than 8%. When the instream waste concentration is below 50%, there is no reasonable potential to cause or contribute to a violation of the instream Georgia Water Quality Standard; therefore, a limit of 6.0 s.u. to 9.0 s.u. is required.
	<p>On July 17, 2011 King America Finishing submitted a technical memorandum demonstrating operational changes and requesting resumption of discharge. On July 19, 2011 EPD approved the resumption of discharge contingent on compliance with several stipulations. One such stipulation was that the pH of the discharge shall not fall below 6.0 s.u. or rise above 8.0 s.u. By limiting the upper pH, the stipulation limits the amount of un-ionized ammonia present in the discharge. Un-ionized ammonia can be toxic to aquatic organisms and ammonia was identified to be one of the primary contributors to the toxicity of the discharge. These more stringent effluent limitations have been included in the permit.</p> <p>In addition, upstream and downstream pH monitoring has been retained in the permit to monitor instream water quality within the vicinity of the discharge.</p>
	<u>TBEL</u> The pH shall remain within the range of 6.0 s.u. to 9.0 s.u. at all time in accordance with 40 CFR 410.42(a) Best Practicable Control Technology Currently Available (BPT).
5-Day Biochemical Oxygen Demand	<u>WQBEL</u> The wasteload allocation completed on July 20, 2018 recommended mass-based effluent limitations of 776 lbs/day daily average and 1,552 lbs/day daily maximum, as well as concentration-based effluent limitations of 30 mg/L daily average and 60 mg/L daily maximum based on dissolved oxygen sag (DOSAG) modeling.
	<p>The concentration-based effluent limitations have been included in the permit, while more stringent mass-based effluent limitations have been applied based on the applicable TBELs.</p>
	<u>TBEL</u> The facility is subject to production-based effluent limitations in accordance with 40 CFR 410.42(a) Best Practicable Control Technology Currently Available (BPT). The permittee has

requested consideration of future production levels when calculating production based TBELs, in anticipation that production may increase to long-term production rates experienced in 2011. The following effluent limitations have been included in the permit based on three tiers of production.

Tier 1 (Average Production of Plant 1 \leq 97,939 lbs/day)

Daily Average (lbs/day): 323
Daily Maximum (lbs/day): 646

Tier 2 (97,939 lbs/day < Average Production of Plant 1 \leq 111,849 lbs/day)

Daily Average (lbs/day): 369
Daily Maximum (lbs/day): 738

Tier 3 (111,849 lbs/day < Average Production of Plant 1 \leq 128,116 lbs/day)

Daily Average (lbs/day): 423
Daily Maximum (lbs/day): 846

Total Suspended
Solids

WQBEL

GA has a narrative Water Quality Standard for total suspended solids. A narrative permit condition stating, “there shall be no floating solids or visible foam other than in trace amounts” has been added.

Additionally, the previous permit included mass-based effluent limitations of 650 lbs/day daily average and 1,160 lbs/day daily maximum. These limits were developed in consultation with the Wildlife Resource Division and are protective of aquatic life cycles (e.g. reproduction). TSS mass-based effluent limitations have been retained from the previous permit.

TBEL

The facility is subject to production-based effluent limitations in accordance with 40 CFR 410.42(a) Best Practicable Control Technology Currently Available (BPT). The permittee has requested consideration of future production levels when calculating production based TBELs, in anticipation that production may increase to long-term production rates experienced in 2011. The following effluent limitations were calculated based on three tiers of production. The more stringent WQBELs have been included in the permit.

Tier 1 (Average Production of Plant 1 \leq 97,939 lbs/day)

Daily Average (lbs/day): 872

Daily Maximum (lbs/day): 1,743

Tier 2 (97,939 lbs/day < Average Production of Plant 1 \leq 111,849 lbs/day)

Daily Average (lbs/day): 995

Daily Maximum (lbs/day): 1,991

Tier 3 (111,849 lbs/day < Average Production of Plant 1 \leq 128,116 lbs/day)

Daily Average (lbs/day): 1,140

Daily Maximum (lbs/day): 2,280

Additionally, the concentration-based effluent limitations of 30 mg/L daily average and 45 mg/L daily maximum included in the previous permit have been removed and replaced with a monitoring only requirement. Section 5.3 for discussion regarding anti-backsliding regulations.

Fecal Coliform	<p><u>WQBEL</u></p> <p>A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the effluent's fecal coliform concentration to 200 #/100mL daily average and 400 #/100mL daily maximum. This condition was incorporated into the facility's previous NPDES permit. The previous permit's fecal coliform limits are equivalent to Georgia's instream water quality standards for fecal coliform.</p> <p>On September 25, 2015 the facility began the operation of a septic tank system under general permit no. GAG278093. All sanitary wastewater from the facility was re-directed to the septic system, thereby eliminating sanitary wastewater from the direct discharge to the Ogeechee River. On October 9, 2015, a series of dye tests were performed confirming that the sanitary wastewater was isolated from the discharge covered under this permit.</p> <p>Following the removal of sanitary wastewater from the facility's discharge, sampling of the effluent continued to indicate the presence of fecal coliform suspected to have originated from non-human sources. On July 18, 2017, the facility collected samples for fecal coliform, e. coli, and a fecal-associated human gene biomarker which was analyzed using real-time quantitative Polymerase Chain Reaction (qPCR) DNA analytical technology.</p>
----------------	--

The results of the sampling showed no trace of human fecal sources despite a fecal coliform reading of 420 MPN/100mL. In accordance with Georgia Rules and Regulations 391-3-6-.03(6)(c)(iii), alternate fecal allocations may be allowed when non-human sources exceed 200 counts per 100 mL on occasion. The permit has been modified to include these allowances. Please see Section 5.3 for discussion regarding anti-backsliding regulations.

During the months of May – October, the facility will be limited to a daily average of 500 #/100mL and a daily maximum of 500 #/100mL. During the months of November – April, the facility will be limited to a daily average of 1,000 #/100mL and a daily maximum of 4,000 #/100mL.

The effluent limitations are independent of the conditions established in the consent decree (Civil Action No. 6:12-CV-00058) between King America Finishing, Inc. and the Ogeechee–Canoochee Riverkeeper signed on January 15, 2014.

TBEL

There is no applicable federal technology based effluent limit.

Temperature

WQBEL

GA has a numeric Water Quality Standard of 90 °F for maximum temperature and a $\Delta 5$ °F temperature differential (391-3-6-.03(6)(a)(v)). Continuous temperature monitoring along with additional grab sampling was required in the previous permit. Monitoring indicated that effluent temperature occasionally exceeded 90°F, with the highest result over the permit term of 94.5 °F. Temperature measurements, however, are recorded immediately after the wastewater treatment plant and do not account for the approximately $\frac{3}{4}$ of a mile that the effluent travels in underground piping prior to discharge to the Ogeechee River. Due to the cooling provided to the effluent by the ambient ground temperature, there is no reasonable potential for the discharge to cause or contribute to an instream violation of the GA Water Quality Standards for temperature. This is supported by the instream temperature data that indicates a negligible increase in instream temperature downstream of the discharge. The instream data showed that on average the downstream temperature was 0.15 °F warmer than the upstream temperature.

Effluent and instream temperature monitoring has been retained from the previous permit to ensure consistent operation and treatment and to ensure water quality standards continue to be met.

TBEL

There is no applicable federal technology based effluent limit.

4.5 Nonconventional Pollutants: Outfall 001 & Instream Discussions

Pollutants of Concern	Basis
Flow	<u>WQBEL</u> A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the instream waste concentration to 8%. This condition was incorporated into the facility's previous NPDES permit and has been retained in this reissuance. In addition, a 3.1 MGD daily average flow limit has been included in the permit, to ensure that the facility's discharge volume remains within the scope of what was considered in the permit development process.
	<u>TBEL</u> There is no applicable federal technology based effluent limit.
Chemical Oxygen Demand	<u>WQBEL</u> A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the effluent's chemical oxygen demand loading to 5,500 lbs/day daily average and 11,000 lbs/day daily maximum. This condition was incorporated into the facility's previous NPDES permit and has been retained in this reissuance for the Tier 2 and 2 effluent limitations. The more stringent TBELs will be applied for the Tier 1 effluent limitations.
	<u>TBEL</u> The facility is subject to production-based effluent limitations in accordance with 40 CFR 410.42(a) Best Practicable Control Technology Currently Available (BPT). The permittee has requested consideration of future production levels when calculating production based TBELs, in anticipation that production may increase to long-term production rates experienced in 2011. The following effluent limitations have been calculated based on three tiers of production. The TBELs will be included in the permit for Tier 1, while the Tier 2 and 3 effluent limitations will include the more stringent WQBELs. Tier 1 (Average Production of Plant 1 \leq 97,939 lbs/day) Daily Average (lbs/day): 5,328 Daily Maximum (lbs/day): 10,656

Tier 2 (97,939 lbs/day < Average Production of Plant 1 ≤ 111,849 lbs/day)

Daily Average (lbs/day): 6,085

Daily Maximum (lbs/day): 12,169

Tier 3 (111,849 lbs/day < Average Production of Plant 1 ≤ 128,116 lbs/day)

Daily Average (lbs/day): 6,970

Daily Maximum (lbs/day): 13,939

Dissolved Oxygen

WQBEL

A daily minimum dissolved oxygen limit of 5.0 mg/L has been added to the permit in accordance with the wasteload allocation to ensure that the water quality standards for dissolved oxygen are met.

TBEL

There is no applicable federal technology based effluent limit.

Total Dissolved Solids
(TDS)

WQBEL

A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the effluent's total dissolved solids concentration to 2,500 mg/L daily average and 3,800 mg/L daily maximum. This condition was incorporated into the facility's previous NPDES permit and has been retained in this reissuance to ensure consistent operation and treatment.

TBEL

There is no applicable federal technology based effluent limit.

Total Hardness
(as CaCO³)

WQBEL

The previous permit included downstream hardness monitoring in order to characterize the receiving stream and in order to use site-specific data when conducting a reasonable potential analysis for hardness-dependent metals such as chromium, total. The hardness data acquired from the previous permit term has sufficiently characterized the receiving stream hardness, thus further hardness sampling has not been required in the facility's NPDES permit.

TBEL

There is no applicable federal technology based effluent limit.

Specific Conductance	<u>WQBEL</u> GA does not have Water Quality Standards for specific conductance. Conductivity is however a useful indicator of a wastewater treatment system's performance as it indicates the presence of inorganic dissolved solids such as nitrate, sulfate, phosphate, sodium, magnesium, iron, aluminum, etc. which are present in the discharge. Furthermore, conductivity is a useful indicator of changes in a water system as streams tend to have a relatively constant range of conductivity and significant changes of conductivity may be indicative of a potential change in facility operations or a change in the wastewater treatment system. Effluent and instream monitoring have been retained from the previous permit for continued characterization of the effluent and receiving waters.
----------------------	--

	<u>TBEL</u> There is no applicable federal technology based effluent limit.
--	--

Sodium	<u>WQBEL</u> GA does not have Water Quality Standards for sodium. Effluent and instream sampling were included in the previous permit as an indicator of salinity and toxicity.
--------	--

Salinity is the total concentration of all dissolved salts in the water including, but not limited to dissolved sodium. As salinity is dependent on the concentration of all dissolved salts, not just sodium, the accuracy for predicting salinity based on sodium is low. A more acceptable and widely used method for estimating salinity is based on conductivity, as conductivity is indicative of a wider range of inorganic dissolved solids. The use of conductivity for the estimation of salinity in the effluent/receiving stream is recommended.

In addition, because GA does not have numeric Water Quality Standards specific to sodium nor has EPA specified a national recommended aquatic life criterion for sodium; the usefulness of sodium monitoring to predict toxicity is limited. As such, toxicity is better measured by the whole effluent toxicity testing required in the permit. If toxicity is detected in the effluent, the permittee may then be required to perform a toxicity identification and reduction evaluation that may target specific constituents such as sodium.

For the reasons indicated above, EPD has removed both effluent and instream monitoring for sodium.

	<u>TBEL</u> There is no applicable federal technology based effluent limit.
--	--

Peroxides

WQBEL

GA does not have Water Quality Standards for peroxides. Peroxides are strong oxidizers and are often used as bleaching agents. Peroxides have moderate toxicity but break down rapidly in water. Effluent, upstream, and downstream monitoring of hydrogen peroxide was included in the previous permit and hydrogen peroxide was consistently non-detectable. Based on the results of the effluent and instream monitoring, monitoring has been removed from the permit.

TBEL

There is no applicable federal technology based effluent limit.

Sulfide

WQBEL

A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the effluent's sulfide concentration to 1.5 mg/L daily average and 3.0 mg/L daily maximum. This condition was incorporated into the facility's previous NPDES permit and will be retained in this permit reissuance.

GA does not have Water Quality Standards for sulfides. Sulfides are constituents found in many types of industrial wastes. When soluble sulfides are added to water, they react with hydrogen ions to form HS or H₂S, with H₂S as the primary concern for toxicity. Instream monitoring of sulfide was included in the previous permit and with a result of non-detect for 48 of the 49 sampling events. Based on these results, instream monitoring for sulfide has been removed from the permit. Sulfides will continue to be controlled through effluent limitations and WET testing.

TBEL

The facility is subject to production-based effluent limitations in accordance with 40 CFR 410.42(a) Best Practicable Control Technology Currently Available (BPT). The permittee has requested consideration of future production levels when calculating production based TBELs, in anticipation that production may increase to long-term production rates experienced in 2011. The following effluent limitations have been included in the permit based on three tiers of production.

Tier 1 (Average Production of Plant 1 ≤ 97,939 lbs/day)

Daily Average (lbs/day): 9.8

Daily Maximum (lbs/day): 19.6

Tier 2 (97,939 lbs/day < Average Production of Plant 1 ≤ 111,849 lbs/day)

Daily Average (lbs/day): 11.2
Daily Maximum (lbs/day): 22.4

Tier 3 (111,849 lbs/day < Average Production of Plant 1 ≤ 128,116 lbs/day)

Daily Average (lbs/day): 12.8
Daily Maximum (lbs/day): 25.6

Total Phenols	<u>WQBEL</u> There is no Georgia Water Quality Standard for Total Phenols.
---------------	---

TBEL
The facility is subject to production-based effluent limitations in accordance with 40 CFR 410.42(a) Best Practicable Control Technology Currently Available (BPT). The permittee has requested consideration of future production levels when calculating production based TBELs, in anticipation that production may increase to long-term production rates experienced in 2011. The following effluent limitations have been included in the permit based on three tiers of production.

Tier 1 (Average Production of Plant 1 ≤ 97,939 lbs/day)

Daily Average (lbs/day): 4.9
Daily Maximum (lbs/day): 9.8

Tier 2 (97,939 lbs/day < Average Production of Plant 1 ≤ 111,849 lbs/day)

Daily Average (lbs/day): 5.6
Daily Maximum (lbs/day): 11.2

Tier 3 (111,849 lbs/day < Average Production of Plant 1 ≤ 128,116 lbs/day)

Daily Average (lbs/day): 6.4
Daily Maximum (lbs/day): 12.8

Formaldehyde	<u>WQBEL</u> A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition requiring the facility to report the effluent's daily average and daily maximum concentration.
--------------	--

Although there is no numeric Georgia Water Quality Standard for formaldehyde, EPD had additionally included a daily maximum effluent limitation of 1.6 mg/L based on best professional judgement. The daily maximum effluent limit was based on the chronic aquatic life water quality criterion established in the technical document *Derivation of Ambient Water Quality Criteria for Formaldehyde (2001)* written by Hohreiter and Riggs. The aquatic life criterion was developed in accordance with the US EPA's *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (1985).

This daily maximum effluent limitation of 1.6 mg/L and the instream monitoring included in the previous permit has been removed from this permit reissuance due to concerns of the validity of effluent sample results due to matrix interference. Furthermore, the maximum downstream concentration measured during the previous term was 0.14 mg/L, indicating that the chronic aquatic life water quality criterion is not being exceeded. Whole effluent toxicity testing will serve to ensure that toxicity is not present in the discharge. See Section 5.3 for discussion surrounding anti-backsliding regulations.

TBEL

There is no applicable federal technology based effluent limit.

Tetrakis(hydroxymethyl)
phosphonium chloride
(THPC)

WQBEL

A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition requiring the facility to report the effluent's THPC concentration twice monthly.

There is no Georgia Water Quality Standard for THPC; however, Georgia elected to incorporate the conditions of the third-party consent decree in the previous permit due to its use in the flame-retardant processing. The THPC concentration of the effluent has not been tied to any toxicity concerns and the effluent monitoring data cannot be compared against any water quality standard or acute/chronic aquatic life criterion. EPD has therefore removed THPC sampling from this permit reissuance. Whole effluent toxicity testing will serve to ensure that toxicity is not present in the discharge.

TBEL

There is no applicable federal technology based effluent limit.

Per- and Polyfluoroalkyl
Substances (PFAS)

WQBEL

The previous permit included a special condition requiring the permittee to sample their effluent twice within 60 days of the effective date of the permit for perfluorooctanesulfonic acid (PFOS). In addition, if the sampling detected PFOS in the effluent, a plan of study was required for annual fish testing. The results of both sampling events for PFOS were non-detect and no fish tissue testing was required.

The facility has phased out the use of C₈ fluorochemistries related to PFOS, replacing them with C₆ fluorochemistries and thus PFOS is not expected to be present in the effluent. While C₈ fluorochemistries such as PFOS and perfluorooctanoic acid (PFOA) are among the more notable per- and polyfluoroalkyl substances (PFAS), they are only a subset of PFAS. PFAS also includes several C₆ fluorochemistries in addition to the C₈ fluorochemistries noted above.

On February 14, 2019 EPA announced a comprehensive PFAS Action Plan to address PFAS contamination and protect the nation's drinking water. There are no surface water drinking water intakes in the downstream vicinity of King America Finishing, Inc.'s; however, in light of the ongoing research and concerns surrounding PFAS, a special condition has been included in the permit requiring a PFAS Characterization Study. The purpose of the PFAS Characterization Study is to determine if the facility has the potential to discharge PFAS into the environment through the discharge of treated wastewater effluent or through industrial sludge disposal. See Section 5.4 for further discussion.

TBEL

There is no applicable federal technology based effluent limit.

Color

WQBEL

A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the maximum color difference between the Ogeechee River (upstream) and the effluent to ADMI until EPD took action on the color study required in the previous permit.

King America Finishing, Inc. submitted the results of their color study in October of 2015. The results showed that the difference in color between the Ogeechee River (upstream) and the final effluent was -13 ADMI on average and a +36 ADMI maximum. Additionally, the difference in color between the Ogeechee River (upstream) and the Ogeechee River (downstream) was -1 ADMI on average and a +6 ADMI maximum. This study complements

the instream sampling required in the previous permit which indicated an average delta ADMI of 3.2 and a maximum delta ADMI of 15.

EPD has evaluated the results of the color study and has determined there is no reasonable potential for the effluent to cause or contribute to an in-stream violation of the GA narrative water quality standard for color. As a result, the color limits included in the previous permit have been removed. See Section 5.3 for discussion surrounding anti-backsliding regulations.

The effluent color monitoring requirements have been retained to ensure that the effluent characterization remains within the scope of which was observed during the color study.

TBEL

There is no applicable federal technology based effluent limit.

Total Phosphorus

WQBEL

Per the *Strategy for Addressing Phosphorus in NPDES Permitting* (2011) all routine permit reissuances must include phosphorus monitoring.

TBEL

There is no applicable federal technology based effluent limit.

Orthophosphate, as P

WQBEL

Per the *Strategy for Addressing Phosphorus in NPDES Permitting* (2011) and the corresponding *Georgia's Plan for the Adoption of Water Quality Standards for Nutrients* (2013) as amended, all routine permit reissuances that have discharges upstream from reservoirs, lakes, impoundments, and/or estuaries must include orthophosphate monitoring.

Effluent monitoring from 2013-2018 indicated that approximately 10% of the facility's total phosphorus loading is in the form of orthophosphate. Orthophosphate monitoring will be retained in this permit to ensure continued characterization of the discharge as the State works to develop numeric nutrient criteria.

TBEL

There is no applicable federal technology based effluent limit.

Ammonia, as N

WQBEL

A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the effluent's total ammonia concentration to 7 mg/L daily average and 13 mg/L daily

maximum. This condition was incorporated into the facility's previous NPDES permit and has been retained in this permit to prevent degradation of instream water quality.

In addition, mass-based effluent limitations of 181 lbs/day daily average and 336 lbs/day daily maximum have been incorporated in the permit based on the facility's permitted daily average flow and the concentration-based effluent limitations noted above.

In addition, instream monitoring has been retained from the previous permit to ensure instream ammonia concentrations do not exceed the calculated chronic toxicity concentration of 1.08 mg/L for Rainbow Mussels as a result of the discharge.

TBEL

There is no applicable federal technology based effluent limit.

Total Kjeldahl Nitrogen,
Organic Nitrogen,
Nitrate/Nitrite

WQBEL

Per "Georgia's Plan for the Adoption of Water Quality Standards for Nutrients" (2013) as amended, EPD is working to develop water quality models throughout the State of Georgia. EPD is requiring all point source discharges with the presence of ammonia to monitor for total Kjeldahl nitrogen, organic nitrogen, and nitrate/nitrite and to develop these models.

TBEL

There is no applicable federal technology based effluent limit.

Total Nitrogen

WQBEL

A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition requiring the facility to report the effluent's total nitrogen concentration. This condition was incorporated into the facility's previous NPDES permit and has been retained in this permit to characterize nutrient loading.

TBEL

There is no applicable federal technology based effluent limit.

4.6 Toxics & Manmade Organic Compounds (126 priority pollutants and metals): Outfall 001 and Instream Discussions

Pollutants of Concern	Basis
Copper, Total	<u>WQBEL</u> Based on the data submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to the Georgia Water Quality Standard for copper.
	<u>TBEL</u> There is no applicable federal technology based effluent limit.
Zinc, Total	<u>WQBEL</u> Based on the data submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to the Georgia Water Quality Standard for zinc.
	<u>TBEL</u> There is no applicable federal technology based effluent limit.
Arsenic, Total	<u>WQBEL</u> Based on the data submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to the Georgia Water Quality Standard for arsenic.
	<u>TBEL</u> There is no applicable federal technology based effluent limit.
Mercury, Total	<u>WQBEL</u> There was a TMDL developed for total mercury fish tissue in 2005 which is applicable to this segment of the Ogeechee River. King America Finishing is listed in this TMDL and was given a wasteload allocation of 6.0 ng/L for Total Hg and 0.05 ng/L for MeHg equivalent to their effluent discharge during TMDL development. The facility was also subject to mercury characterization and/or minimization conditions.
	The previous permit included special conditions requiring a six month mercury characterization study, with an additional requirement to develop a mercury minimization plan if the characterization showed the average concentration of total mercury was greater than 6.0 ng/L. Results of the mercury characterization study showed an average concentration for total mercury of 0.73 ng/L; therefore, a minimization plan was not required and mercury monitoring was reduced to twice per year for the remainder of the permit term. In addition, the mercury sample submitted with the application showed a concentration of

1.3 ng/L. To assure that average total mercury concentrations remain below the 6.0 ng/L wasteload allocation or the concentration of mercury in the source water; whichever is greater, twice per year effluent and source water monitoring has been established in this permit.

TBEL

There is no applicable federal technology based effluent limit.

Chromium, Total

WQBEL

Based on the data submitted in the application, the reasonable potential analysis showed there is no reasonable potential to cause or contribute to the Georgia Water Quality Standard for chromium. As a result, the chromium concentration limits of 1.2 mg/L daily average and 2.0 mg/L daily maximum included in the previous permit have been removed and replaced with monitoring. See Section 5.3 for discussion surrounding anti-backsliding regulations.

TBEL

The facility is subject to production-based effluent limitations in accordance with 40 CFR 410.42(a) Best Practicable Control Technology Currently Available (BPT). The permittee has requested consideration of future production levels when calculating production based TBELs, in anticipation that production may increase to long-term production rates experienced in 2011. The following effluent limitations have been included in the permit based on three tiers of production.

Tier 1 (Average Production of Plant 1 \leq 97,939 lbs/day)

Daily Average (lbs/day): 4.9

Daily Maximum (lbs/day): 9.8

Tier 2 (97,939 lbs/day < Average Production of Plant 1 \leq 111,849 lbs/day)

Daily Average (lbs/day): 5.6

Daily Maximum (lbs/day): 11.2

Tier 3 (111,849 lbs/day < Average Production of Plant 1 \leq 128,116 lbs/day)

Daily Average (lbs/day): 6.4

Daily Maximum (lbs/day): 12.8

4.7 Calculations for Water Quality Based Effluent Limits

4.7.a Instream Waste Concentration (IWC)⁽¹⁾

$$\text{IWC} = \frac{\text{Effluent Flow (gal/day)}}{\text{Effluent Flow (gal/day)} + 7\text{Q10 (gal/day)}}$$

$$\text{IWC} = \frac{3,100,000 \text{ (gal/day)}}{(3,100,000 \text{ (gal/day)} + 60,749,568 \text{ (gal/day)})}$$

$$\text{IWC} = 0.0486 \text{ or } 4.86\%$$

⁽¹⁾ The instream waste concentration (IWC) is calculated to be 4.86% based on the permitted flow and anticipated 7Q10 flow values. During periods of river flow that are below the 7Q10 value, the permit limits the IWC to no more than 8%.

4.7.b Biochemical Oxygen Demand (5-day)

The concentration-based effluent limits are based on the dissolved oxygen sag (DOSAG) modeling results in the Wasteload Allocation dated July 20, 2018.

$$\text{Daily Average} = 30 \text{ mg/L}$$

$$\text{Daily Maximum} = 2.0 \times \text{Daily Average (mg/L)}^{(1)}$$

$$\text{Daily Maximum} = 2.0 \times 30 \text{ (mg/L)}$$

$$\text{Daily Maximum} = 60 \text{ mg/L}$$

⁽¹⁾ The daily maximum is determined by using a 2.0x multiplier on the daily average. This multiplier is consistent with that used in 40 CFR 410 Subpart D Regulations for BOD₅.

4.8 Technology Based Effluent Limitation Calculations

There are several ways to calculate TBELs when developing case-by-case limitations. EPD can use an approach consistent with the statistical approach EPA has used to develop effluent guidelines or they can utilize several other mathematically and statistically accepted approaches depending on characteristics of the data. In general, EPD utilizes EPA's "NPDES Permit Writer Manual," September 2010, Section 5.2.3, "Case-by-Case TBELs for Industrial Dischargers" and EPA's "Technical Support Document for Water Quality Based Toxic Control," March 1991, Section 5.2, "Basis Principles of Effluent Variability," as guidance to develop limits.

If applicable, when there is no federal technology based effluent limit EPD evaluates the effluent data, operating records and discharge monitoring reports to calculate the long-term average for the parameter. The long-term average is then used to derive the effluent limits.

EPD recognizes there are several ways to calculate technology-based limits and, when applicable, may deviate from the general practice.

4.8.a Chemical Oxygen Demand (Production-Based Effluent Limitations)

Tier 1 – Average Production of Plant 1 \leq 97,939 lbs/day

Daily Average

$COD_{Plant\ 1} = \text{Average Production} \times \text{Daily Average Production Factor}$

$COD_{Plant\ 1} = 97,939 \text{ (lbs/day)} \times 0.030$

$COD_{Plant\ 1} = 2,938.2 \text{ lbs/day}$

$COD_{Finishing\ (Natural\ Fiber)} = \text{Average Production of Finished Natural Fiber} \times \text{Daily Average Production Factor}$

$COD_{Finishing\ (Natural\ Fiber)} = 27,423 \text{ (lbs/day)} \times 0.010$

$COD_{Finishing\ (Natural\ Fiber)} = 274.2 \text{ (lbs/day)}$

$COD_{Finishing\ (Complex\ Blend)} = \text{Average Production of Finished Complex Blend} \times \text{Daily Average Production Factor}$

$COD_{Finishing\ (Complex\ Blend)} = 70,516 \text{ (lbs/day)} \times 0.030$

$COD_{Finishing\ (Complex\ Blend)} = 2,115.5 \text{ (lbs/day)}$

$COD_{Total} = COD_{Plant\ 1} + COD_{Finishing\ (Natural\ Fiber)} + COD_{Finishing\ (Complex\ Blend)}$

$COD_{Total} = 2,938.2 \text{ (lbs/day)} + 274.2 \text{ (lbs/day)} + 2,115.5 \text{ (lbs/day)}$

$COD_{Total} = 5,327.9 \text{ (lbs/day)}$

Daily Maximum

$COD_{Plant\ 1} = \text{Average Production} \times \text{Daily Maximum Production Factor}$

$COD_{Plant\ 1} = 97,939 \text{ (lbs/day)} \times 0.060$

$COD_{Plant\ 1} = 5,876.3 \text{ lbs/day}$

$COD_{Finishing\ (Natural\ Fiber)} = \text{Average Production of Finished Natural Fiber} \times \text{Daily Maximum Production Factor}$

$COD_{Finishing\ (Natural\ Fiber)} = 27,423 \text{ (lbs/day)} \times 0.020$

$COD_{Finishing\ (Natural\ Fiber)} = 548.5 \text{ (lbs/day)}$

$COD_{Finishing\ (Complex\ Blend)} = \text{Average Production of Finished Complex Blend} \times \text{Daily Maximum Production Factor}$

$COD_{Finishing\ (Complex\ Blend)} = 70,516 \text{ (lbs/day)} \times 0.060$

$COD_{Finishing\ (Complex\ Blend)} = 4231.0 \text{ (lbs/day)}$

$COD_{Total} = COD_{Plant\ 1} + COD_{Finishing\ (Natural\ Fiber)} + COD_{Finishing\ (Complex\ Blend)}$

$COD_{Total} = 5,876.3 \text{ (lbs/day)} + 548.5 \text{ (lbs/day)} + 4231.0 \text{ (lbs/day)}$

$COD_{Total} = 10,655.8 \text{ (lbs/day)}$

See Appendix F for the complete set of calculations.

4.8.b Biochemical Oxygen Demand_{5-day} (Production-Based Effluent Limitations)

Tier 1 – Average Production of Plant 1 ≤ 97,939 lbs/day

Daily Average

$BOD_5 = \text{Average Production} \times \text{Daily Average Production Factor}$

$BOD_5 = 97,939 \text{ (lbs/day)} \times 0.0033$

$BOD_5 = 323 \text{ (lbs/day)}$

Daily Maximum

$BOD_5 = \text{Average Production} \times \text{Daily Maximum Production Factor}$

$BOD_5 = 97,939 \text{ (lbs/day)} \times 0.0066$

$BOD_5 = 646 \text{ (lbs/day)}$

See Appendix F for the complete set of calculations.

4.8.c Total Suspended Solids (Production-Based Effluent Limitations)

Tier 1 – Average Production of Plant 1 ≤ 97,939 lbs/day

Daily Average

$TSS = \text{Average Production} \times \text{Daily Average Production Factor}$

$TSS = 97,939 \text{ (lbs/day)} \times 0.0089$

$TSS = 872 \text{ (lbs/day)}$

Daily Maximum

$TSS = \text{Average Production} \times \text{Daily Maximum Production Factor}$

$TSS = 97,939 \text{ (lbs/day)} \times 0.0178$

$TSS = 1,743 \text{ (lbs/day)}$

See Appendix F for the complete set of calculations.

4.8.d Sulfide (Production-Based Effluent Limitations)

Tier 1 – Average Production of Plant 1 \leq 97,939 lbs/day

Daily Average

Sulfide = Average Production x Daily Average Production Factor

Sulfide = 97,939 (lbs/day) x 0.0001

Sulfide = 9.8 (lbs/day)

Daily Maximum

Sulfide = Average Production x Daily Maximum Production Factor

Sulfide = 97,939 (lbs/day) x 0.0002

Sulfide = 19.6 (lbs/day)

See Appendix F for the complete set of calculations.

4.8.e Total Phenols (Production-Based Effluent Limitations)

Tier 1 – Average Production of Plant 1 \leq 97,939 lbs/day

Daily Average

Total Phenols = Average Production x Daily Average Production Factor

Total Phenols = 97,939 (lbs/day) x 0.00005

Total Phenols = 4.9 (lbs/day)

Daily Maximum

Total Phenols = Average Production x Daily Maximum Production Factor

Total Phenols = 97,939 (lbs/day) x 0.0001

Total Phenols = 9.8 (lbs/day)

See Appendix F for the complete set of calculations.

4.8.f Total Chromium (Production-Based Effluent Limitations)

Tier 1 – Average Production of Plant 1 \leq 97,939 lbs/day

Daily Average

Total Chromium = Average Production x Daily Average Production Factor

Total Chromium = 97,939 (lbs/day) x 0.00005

Total Chromium = 4.9 (lbs/day)

Daily Maximum

Total Chromium = Average Production x Daily Maximum Production Factor

Total Chromium = 97,939 (lbs/day) x 0.0001

Total Chromium = 9.8 (lbs/day)

See Appendix F for the complete set of calculations.

4.9 Comparison & Summary of Water Quality vs. Technology Based Effluent Limits

After preparing and evaluating applicable technology-based effluent limitations and water quality-based effluent limitations, the most stringent limits are applied in the permit. Pollutants of concern with an effluent limit of monitor and report are not included in the below table.

Outfall 001⁽¹⁾ – Process Water, Cooling Water, and Stormwater

Tier 1 – Average Production of Plant 1 \leq 97,939 lbs/day

Parameter	WQBELs	TBELs	Explanation
Flow (MGD)	3.1	None	WQBEL – WQS
IWC (%)	8	None	WQBEL – WQS
Dissolved Oxygen (mg/L)	5.0 (Daily Minimum)	None	WQBEL – WQS
BOD ₅ (lbs/day)	N/A	323/646	TBEL – ELG
BOD ₅ (mg/L)	30/60	N/A	WQBEL – WQS
COD (lbs/day)	5,500/11,000	5,328/10,656	TBEL – ELG
TSS (lbs/day)	650/1,160	872/1,743	WQBEL – WQS
Sulfide (lbs/day)	None	9.8/19.6	TBEL – ELG
Sulfide (mg/L)	1.5/3.0	N/A	WQBEL – Other ⁽²⁾
TDS (mg/L)	2,500/3,800	None	WQBEL – Other ⁽²⁾
Total Phenols (lbs/day)	None	4.9/9.8	TBEL – ELG
Mercury, Total (ng/L)	6.0/6.0 ⁽³⁾	None	WQBEL – TMDL
Chromium, Total (lbs/day)	N/A	4.9/9.8	TBEL – ELG
Ammonia, as N (lbs/day)	181/336	None	WQBEL – Other ⁽²⁾
Ammonia, as N (mg/L)	7/13	None	WQBEL – Other ⁽²⁾

Fecal Coliform (May – Oct.) (#/100mL)	500/500	None	WQBEL – WQS
Fecal Coliform (Nov. – Apr.) (#/100mL)	1,000/4,000	None	WQBEL – WQS
pH (s.u.)	6.0 – 8.0	6.0 – 9.0	WQBEL – WQS

⁽¹⁾ Whole effluent toxicity limitations are outlined separately in the special conditions section.

⁽²⁾ Effluent limitations based on a consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 which negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper.

⁽³⁾ The concentration of mercury in the effluent shall not exceed 6.0 ng/L or a concentration equal to the concentration of mercury in the source water; whichever is greater.

Tier 2 – 97,939 lbs/day < Average Production of Plant 1 ≤ 111,849 lbs/day

Parameter	WQBELs	TBELs	Explanation
Flow (MGD)	3.1	None	WQBEL – WQS
IWC (%)	8	None	WQBEL – WQS
Dissolved Oxygen (mg/L)	5.0 (Daily Minimum)	None	WQBEL – WQS
BOD ₅ (lbs/day)	N/A	369/738	TBEL – ELG
BOD ₅ (mg/L)	30/60	N/A	WQBEL – WQS
COD (lbs/day)	5,500/11,000	6,085/12,169	WQBEL – Other ⁽²⁾
TSS (lbs/day)	650/1,160	995/1,991	WQBEL – WQS
Sulfide (lbs/day)	None	11.2/22.4	TBEL – ELG
Sulfide (mg/L)	1.5/3.0	N/A	WQBEL – Other ⁽²⁾
TDS (mg/L)	2,500/3,800	None	WQBEL – Other ⁽²⁾
Total Phenols (lbs/day)	None	5.6/11.2	TBEL – ELG
Mercury, Total (ng/L)	6.0/6.0 ⁽³⁾	None	WQBEL – TMDL
Chromium, Total (lbs/day)	N/A	5.6/11.2	TBEL – ELG
Ammonia, as N (lbs/day)	181/336	None	WQBEL – Other ⁽²⁾
Ammonia, as N (mg/L)	7/13	None	WQBEL – Other ⁽²⁾
Fecal Coliform (May – Oct.) (#/100mL)	500/500	None	WQBEL – WQS
Fecal Coliform (Nov. – Apr.) (#/100mL)	1,000/4,000	None	WQBEL – WQS
pH (s.u.)	6.0 – 8.0	6.0 – 9.0	WQBEL – WQS

⁽¹⁾ Whole effluent toxicity limitations are outlined separately in the special conditions section.

⁽²⁾ Effluent limitations based on a consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 which negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper.

⁽³⁾ The concentration of mercury in the effluent shall not exceed 6.0 ng/L or a concentration equal to the concentration of mercury in the source water; whichever is greater.

Tier 3 – 111,849 lbs/day < Average Production of Plant 1 ≤ 128,116 lbs/day

Parameter	WQBELs	TBELs	Explanation
Flow (MGD)	3.1	None	WQBEL – WQS
IWC (%)	8	None	WQBEL – WQS
Dissolved Oxygen (mg/L)	5.0 (Daily Minimum)	None	WQBEL – WQS
BOD ₅ (lbs/day)	N/A	423/846	TBEL – ELG
BOD ₅ (mg/L)	30/60	N/A	WQBEL – WQS
COD (lbs/day)	5,500/11,000	6,970/13,939	WQBEL – Other ⁽²⁾
TSS (lbs/day)	650/1,160	1,140/2,280	WQBEL – WQS
Sulfide (lbs/day)	None	12.8/25.6	TBEL – ELG
Sulfide (mg/L)	1.5/3.0	N/A	WQBEL – Other ⁽²⁾
TDS (mg/L)	2,500/3,800	None	WQBEL – Other ⁽²⁾
Total Phenols (lbs/day)	None	6.4/12.8	TBEL – ELG
Mercury, Total (ng/L)	6.0/6.0 ⁽³⁾	None	WQBEL – TMDL
Chromium, Total (lbs/day)	N/A	6.4/12.8	TBEL – ELG
Ammonia, as N (lbs/day)	181/336	None	WQBEL – Other ⁽²⁾
Ammonia, as N (mg/L)	7/13	None	WQBEL – Other ⁽²⁾
Fecal Coliform (May – Oct.) (#/100mL)	500/500	None	WQBEL – WQS
Fecal Coliform (Nov. – Apr.) (#/100mL)	1,000/4,000	None	WQBEL – WQS
pH (s.u.)	6.0 – 8.0	6.0 – 9.0	WQBEL – WQS

⁽¹⁾ Whole effluent toxicity limitations are outlined separately in the special conditions section.

⁽²⁾ Effluent limitations based on a consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 which negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper.

⁽³⁾ The concentration of mercury in the effluent shall not exceed 6.0 ng/L or a concentration equal to the concentration of mercury in the source water; whichever is greater.

5.0 **OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS**

5.1 **Special Conditions**

a. Instream Waste Concentration

A consent decree (Civil Action No. 6:12-CV-00058) signed on January 15, 2014 negotiated a settlement between King America Finishing, Inc. and the Ogeechee-Canoochee Riverkeeper. The consent decree included a condition limiting the instream waste concentration (IWC) to 8%. This condition was incorporated into the facility's previous NPDES permit and has been retained in this reissuance as a special condition. Monitoring at USGS Rocky Ford gage (#02202040) has been included to ensure discharges do not exceed the IWC of 8%.

b. Per- and Polyfluoroalkyl Substances (PFAS) Characterization Study

EPD has included a PFAS characterization study in the permit based on the industry category of the facility. The purpose of the PFAS Characterization Study is to determine if the facility has the potential to discharge PFAS into the environment through the discharge of treated wastewater effluent or through industrial sludge disposal.

c. Whole Effluent Toxicity (WET) Testing

Due to issues with historical toxicity from the discharge, acute and chronic whole effluent toxicity (WET) testing and limitations have been required for both the effluent and the receiving waterbody. WET testing frequency has been adjusted, where applicable; based on the demonstrated performance of the facility over the previous permit term. Failure of two WET tests will trigger a requirement to conduct a Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE).

d. Sludge Management Plan

On August 31, 2020, EPD approved a sludge management plan allowing for the disposal of wastewater sludge at the Holcim (US) Inc. facility located at 200 Safety St. Hwy 453, Holy Hill, SC 29059 to be used as supplemental kiln fuel. The sludge management plan has been incorporated into this permit reissuance and is contingent upon the willingness and ability for the Holcim (US) Inc. facility to accept and reuse the sludge in accordance with their hazardous waste permit (SCD 003 368 891).

5.2 Compliance Schedules

The permittee shall attain compliance with all limits on the effective date of the permit.

5.3 Anti-Backsliding

Total Suspended Solids

The limits in this permit are in compliance with 40 C.F.R. 122.44(l). 40 C.F.R. 122.44(l)(2)(i)(B)(2) states, permit limits may be less stringent if “The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).” King America Finishing, Inc. is subject to production-based effluent limitations in accordance with 40 C.F.R. 410.42(a) which establish mass-based effluent limitations for TSS. Additionally, King America Finishing, Inc. is subject to Georgia’s narrative Water Quality Standard for TSS. The 2013 permit includes concentration based TSS effluent limitations using EPD’s best professional judgement (BPJ) based on limits applied to municipal wastewater treatment facilities through 40 C.F.R. 133, Secondary Treatment Regulations. This approach is improper as it effectively creates a technology-based effluent limit (TBEL) when a TBEL already exists for the facility under 40 C.F.R. 410.42(a). Additionally, the concentration-based effluent limitations do not qualify as water quality-based effluent limits (WQBELs), as they do not represent a translation of Georgia’s narrative Water Quality Standard for TSS

but rather a reasonable level of treatment expected from secondary treatment technology for POTWs. Thus, the concentration-based effluent limitations for TSS have been removed from this permit.

Fecal Coliform

The limits in this permit are in compliance with 40 C.F.R. 122.44(l). 40 C.F.R. 122.44(l)(2)(i)(B)(1) states, permit limits may be less stringent if “Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.” In the 2013 permit reissuance, EPD included fecal coliform limitations of 200 #/100mL daily average and 400 #/100mL based on the water quality criteria for fecal coliform included in Ga. Comp. R. & Regs. 391-3-6-.03(6)(c) due to the presence of sanitary wastewater in the facility’s discharge.

During the permit term, exceedances of the fecal coliform effluent limitations were observed. In response, on September 25, 2015 the facility began the operation of a septic tank system under general permit no. GAG278093. All sanitary wastewater from the facility was re-directed to the septic system, thereby eliminating sanitary wastewater from the direct discharge to the Ogeechee River. On October 9, 2015, a series of dye tests were performed confirming that the sanitary wastewater was isolated from the discharge covered under this permit.

Following the removal of sanitary wastewater from the facility’s discharge, sampling of the effluent continued to indicate the presence of fecal coliform suspected to have originated from non-human sources. On July 18, 2017, the facility collected samples for fecal coliform, e. coli, and a fecal-associated human gene biomarker which was analyzed using real-time quantitative Polymerase Chain Reaction (qPCR) DNA analytical technology. The results of the sampling showed no trace of human fecal sources despite a fecal coliform reading of 420 MPN/100mL. In accordance with Ga. Comp. R. & Regs. 392-3-6-.03(6)(c)(iii), alternate fecal allocations may be allowed when non-human sources exceed 200 counts per 100 mL on occasion.

In light of the new information provided by King America Finishing, Inc. the permit limitations have been updated to include these allowances. During the months of May – October, the facility will be limited to a daily average of 500 #/100mL and a daily maximum of 500 #/100mL. During the months of November – April, the facility will be limited to a daily average of 1,000 #/100mL and a daily maximum of 4,000 #/100mL.

Formaldehyde

The limits in this permit are in compliance with 40 C.F.R. 122.44(l). 40 C.F.R. 122.44(l)(2)(i)(C) states, permit limits may be less stringent if “a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy.” Additionally, 40 C.F.R. 122.44(l)(2)(i)(B)(1) states, permit limits may be less stringent if “Information is available which was not available at the time of permit issuance (other than revised, regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. While Georgia does not

have a numeric water quality standard for formaldehyde, in the 2013 permit EPD derived aquatic life criteria for formaldehyde in accordance with EPA's *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* and available data on aquatic toxicity. In accordance with the 2013 permit requirements, King America Finishing, Inc. conducted daily formaldehyde sampling on the effluent using EPA Method 8315A. EPA Method 8315A is a hazardous waste test method published by the EPA in the SW-846 Compendium which was utilized by the facility to substitute EPA 40 C.F.R. 136 Method 1667A due to the limited commercial availability of Method 1667A certified labs. Both methods analyze formaldehyde through the derivatization of aldehydes using 2,4-dinitrophenylhydrazine (DNPH) in a sample buffered to a pH of 5. Following derivatization, high performance liquid chromatography is performed to analyze the formaldehyde concentration. Due to the similarity in both Methods and the lack of an alternative analytical method, the ability to accurately determine formaldehyde concentrations may be hindered by matrix interferences.

The analytical data for formaldehyde submitted by King America Finishing, Inc. has shown considerable variability and has resulted in several exceedances resulting in a consent order issued by EPD (EPD-WP-8321). As part of the consent order, King America, Inc. completed a Corrective Action Plan which included investigations of formaldehyde exceedances. Investigations included an assessment of production operations that use formaldehyde or formaldehyde-bearing compounds, an assessment of wastewater treatment plant operations, an evaluation of formaldehyde analytical methods and procedures, and consideration of alternative treatment technologies. The investigations yielded minor operational changes but the presence of matrix interference due to co-extraction of other matrix contaminants was identified as a significant concern. King America Finishing, Inc. has since shortened the hold time of samples to reduce the likelihood of interferences. The Method hold time allowed for 3 days between sampling and preparation and an additional 3 days between preparation and analysis. This hold time was shortened to allow for 2 days between sampling and preparation and no more than 1 day between preparation and analysis. Although this approach has served to reduce matrix contamination, attempts to modify the Method to eliminate matrix contamination all together have been unsuccessful in meeting the quality assurance and quality control procedures outlined in the Method.

The permittee may continue to evaluate alternative methodologies as part of their Corrective Action Plan (CAP); however, in light of the information presented above, there may be no reasonably available remedy for correcting the matrix interference experienced in the analytical sampling for formaldehyde. Furthermore, the presence of such matrix interferences calls into question the suitability of formaldehyde sampling for the determination of aquatic toxicity. Thus, EPD has removed the formaldehyde effluent limitations. Any potential toxicity of the effluent will continue to be captured by the whole effluent toxicity testing required in the permit which would capture any toxicity exhibited by formaldehyde in the effluent as well as identify any potential additive and synergistic effects of the effluent as a whole. This approach is consistent with Georgia EPD's *NPDES Reasonable Potential Procedures (2003)* document which outlines procedures for permitting chemical constituents for which numeric water quality criteria have not been established.

Color

The limits in this permit are in compliance with 40 C.F.R. 122.44(l). 40 C.F.R. 122.44(l)(2)(i)(B)(1) states, permit limits may be less stringent if “Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.” In the 2013 permit reissuance, EPD included color limitations from a third-party settlement (Civil Action No. 6:12-CV-00058) as interim limitations until a color study was completed. A color study was completed by King America Finishing, Inc. in October of 2015. The results showed that the difference in color between the Ogeechee River (upstream) and the final effluent was -13 ADMI on average and a +36 ADMI maximum. Additionally, the difference in color between the Ogeechee River (upstream) and the Ogeechee River (downstream) was -1 ADMI on average and a +6 ADMI maximum. This study complements the instream sampling required in the previous permit which indicated an average delta ADMI of 3.2 and a maximum delta ADMI of 15. The results of the color study indicate that there is no reasonable potential for the effluent to cause or contribute to an in-stream violation of the Georgia narrative water quality standard for color. Thus, EPD has removed the color limitations in light of the additional information.

Total Phenols

The limits in this permit are in compliance with 40 C.F.R. 122.44(l). 40 C.F.R. 122.44(l)(2)(i)(B)(2) states, permit limits may be less stringent if “The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).” King America Finishing, Inc. is subject to production-based effluent limitations in accordance with 40 C.F.R. 410.42(a) which establish mass-based effluent limitations for total phenols. The 2013 permit includes total phenols effluent limitations using EPD’s best professional judgement based on the demonstrated performance of the facility. This approach is improper as it effectively creates a technology-based effluent limit (TBEL) when a TBEL already exists for the facility under 40 C.F.R. 410.42(a) which establishes a nationwide standard for performance. The previous permit limitations have been replaced with the effluent limitations established in 40 C.F.R. 410.42(a). The less stringent effluent limitations will not result in a violation of a water quality standard based on the reasonable potential analysis.

Chromium, Total

The limits in this permit are in compliance with 40 C.F.R. 122.44(l). 40 C.F.R. 122.44(l)(2)(i)(B)(1) states, permit limits may be less stringent if “Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.” In the 2013 permit reissuance, EPD included water quality-based effluent limitations for chromium using the conservative assumption that all chromium discharged was in the form of Chromium VI. The inclusion of a water quality based effluent limitation was not based on data that indicated a reasonable potential for the facility to violate the Georgia Water Quality Standard for chromium but was rather included in an abundance of caution due to the 2011 fish kill. Sampling over the previous permit term and data provided in the permit

application provided 156 data points for Chromium to be used in EPD's reasonable potential analysis. The results of the reasonable potential analysis indicate that there is no reasonable potential for the discharge to violate the Georgia Water Quality Standard for chromium. Thus, in accordance with the reasonable potential analysis procedures outlined in Ga. Comp. R. & Regs. 391-3-6-.06(4)(d)(5)(ii) the concentration-based water quality-based effluent limitations have been removed from the permit.

5.4 Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances; hereafter named PFAS are a group of man-made chemicals that have been identified by EPA as emerging chemicals of concern. These synthetic chemicals are identified by their elemental bonds of fluorine and carbon. Such elemental bonds are difficult to break and as a result PFAS has been identified to be very persistent in the environment and bioaccumulate in living organisms. This is of concern, as initial studies have indicated that exposure to such substances can lead to adverse health effects in humans and animals such as: reproductive and developmental, liver and kidney, and immunological effects in laboratory animals. In response to such concerns, on February 14, 2019 EPA announced a comprehensive PFAS Action and published further updates in February 2020. The action plan is a multi-media, multi-program, national research, management, and risk communication plan to address PFAS in drinking water, identify and clean up PFAS contamination, expand monitoring of PFAS in manufacturing, increase PFAS scientific research, and exercise effective enforcement tools. Of specific interest during this permitting process are EPA's efforts to develop water quality criteria for PFAS, identify industrial sources that may warrant further study and regulations, and continued efforts to develop analytical methods.

Several industries, including textile mills, have been identified as potential contributors to PFAS as part of their manufacturing process. In conjunction with the national response for PFAS, EPD is working on furthering the objectives of the action plan on a state level. This includes the development of a PFAS Characterization Study special condition to be included in permits where discharges of PFAS are suspected. The purpose of the PFAS Characterization Study is to determine if the facility has the potential to discharge PFAS into the environment through the discharge of treated wastewater effluent or through industrial sludge disposal. This special condition requires PFAS monitoring so that EPD may ensure that state waters are free from toxic substances, in amounts, concentrations or combinations which are harmful to humans, animals or aquatic life. This permit condition is necessary and appropriate for the protection of Georgia water quality criteria in accordance with GA. Comp. R. & Regs. 391-3-6-.03(5)(e).

6.0 REPORTING

The facility has been assigned to the following EPD office for reporting, compliance and enforcement.

Georgia Environmental Protection Division
Coastal District Office
400 Commerce Center Drive
Brunswick, Georgia 31523-8251

6.1 E-Reporting

The permittee is required to electronically submit documents in accordance with 40 CFR Part 127.

7.0 REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable

8.0 PERMIT EXPIRATION

The permit will expire five years from the effective date.

9.0 PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

9.1 Comment Period

The Georgia Environmental Protection Division (EPD) proposes to issue a permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Georgia Environmental Protection Division
Wastewater Regulatory Program
2 Martin Luther King Jr. Drive
Suite 1152 East
Atlanta, Georgia 30334

The permit application, draft permit, and other information are available for review at 2 Martin Luther King Jr. Drive, Suite 1152 East, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information, you can contact 404-463-1511.

9.2 Public Comments

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address above, or via e-mail at EPDcomments@dnr.ga.gov within 30 days of the initiation of the public comment period. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit number should be placed on the top of the first page of comments to ensure that your comments will be forwarded to the appropriate staff.

9.3 Public Hearing

Any applicant, affected state or interstate agency, the Regional Administrator of the U.S. Environmental Protection Agency (EPA) or any other interested agency, person or group of persons may request a public hearing with respect to an NPDES permit application if such request is filed within thirty (30) days following the date of the public notice for such application. Such request must indicate the interest of the party filing the request,

the reasons why a hearing is requested, and those specific portions of the application or other NPDES form or information to be considered at the public hearing.

The Director shall hold a hearing if he determines that there is sufficient public interest in holding such a hearing. If a public hearing is held, notice of same shall be provided at least thirty (30) days in advance of the hearing date.

In the event that a public hearing is held, both oral and written comments will be accepted; however, for the accuracy of the record, written comments are encouraged. The Director or a designee reserves the right to fix reasonable limits on the time allowed for oral statements and such other procedural requirements, as deemed appropriate.

Following a public hearing, the Director, unless it is decided to deny the permit, may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue the permit.

If no public hearing is held, and, after review of the written comments received, the Director determines that a permit should be issued and that the determinations as set forth in the proposed permit are substantially unchanged, the permit will be issued and will become final in the absence of a request for a contested hearing. Notice of issuance or denial will be made available to all interested persons and those persons that submitted written comments to the Director on the proposed permit.

If no public hearing is held, but the Director determines, after a review of the written comments received, that a permit should be issued but that substantial changes in the proposed permit are warranted, public notice of the revised determinations will be given and written comments accepted in the same manner as the initial notice of application was given and written comments accepted pursuant to EPD Rules, Water Quality Control, subparagraph 391-3-6-.06(7)(b). The Director shall provide an opportunity for public hearing on the revised determinations. Such opportunity for public hearing and the issuance or denial of a permit thereafter shall be in accordance with the procedures as are set forth above.

9.4 Final Determination

At the time that any final permit decision is made, the Director shall issue a response to comments. The issued permit and responses to comments can be found at the following address:

<http://epd.georgia.gov/watershed-protection-branch-permit-and-public-comments-clearinghouse-0>

9.5 Contested Hearings

Any person who is aggrieved or adversely affected by the issuance or denial of a permit by the Director of EPD may petition the Director for a hearing if such petition is filed in the office of the Director within thirty (30) days from the date of notice of such permit issuance or denial. Such hearing shall be held in accordance with the EPD Rules, Water Quality Control, subparagraph 391-3-6-.01.

Petitions for a contested hearing must include the following:

1. The name and address of the petitioner;
2. The grounds under which petitioner alleges to be aggrieved or adversely affected by the issuance or denial of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which are relevant to the action in question.

Appendix A – Applicable Federal Regulations

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of September 18, 2020

Title 40 → Chapter I → Subchapter N → Part 410

Title 40: Protection of Environment

PART 410—TEXTILE MILLS POINT SOURCE CATEGORY

Contents

GENERAL PROVISIONS

- §410.00 Applicability.
- §410.01 General definitions.
- §410.02 Monitoring requirements. [Reserved]

Subpart A—Wool Scouring Subcategory

- §410.10 Applicability; description of the wool scouring subcategory.
- §410.11 Specialized definitions.
- §410.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.14 Pretreatment standards for existing sources (PSES).
- §410.15 New source performance standards (NSPS).
- §410.16 Pretreatment standards for new sources (PSNS).
- §410.17 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart B—Wool Finishing Subcategory

- §410.20 Applicability; description of the wool finishing subcategory.
- §410.21 Specialized definitions.
- §410.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.23 Effluent limitation representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.24 Pretreatment standards for existing sources (PSES).
- §410.25 New source performance standards (NSPS).
- §410.26 Pretreatment standards for new sources (PSNS).
- §410.27 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart C—Low Water Use Processing Subcategory

- §410.30 Applicability; description of the low water use processing subcategory.
- §410.31 Specialized definitions.
- §410.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.34 Pretreatment standards for existing sources (PSES).
- §410.35 New source performance standards (NSPS).
- §410.36 Pretreatment standards for new sources (PSNS).
- §410.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart D—Woven Fabric Finishing Subcategory

- §410.40 Applicability; description of the woven fabric finishing subcategory.
- §410.41 Specialized definitions.
- §410.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.44 Pretreatment standards for existing sources (PSES).
- §410.45 New source performance standards (NSPS).
- §410.46 Pretreatment standards for new sources (PSNS).
- §410.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart E—Knit Fabric Finishing Subcategory

- §410.50 Applicability; description of the knit fabric finishing subcategory.
- §410.51 Specialized definitions.
- §410.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.54 Pretreatment standards for existing sources (PSES).
- §410.55 New source performance standards (NSPS).
- §410.56 Pretreatment standards for new sources (PSNS).
- §410.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart F—Carpet Finishing Subcategory

- §410.60 Applicability; description of the carpet finishing subcategory.
- §410.61 Specialized definitions.
- §410.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

- §410.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.64 Pretreatment standards for existing sources (PSES).
- §410.65 New source performance standards (NSPS).
- §410.66 Pretreatment standards for new sources (PSNS).
- §410.67 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart G—Stock and Yarn Finishing Subcategory

- §410.70 Applicability; description of the stock and yarn finishing subcategory.
- §410.71 Specialized definitions. [Reserved]
- §410.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.74 Pretreatment standards for existing sources (PSES).
- §410.75 New source performance standards (NSPS).
- §410.76 Pretreatment standards for new sources (PSNS).
- §410.77 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart H—Nonwoven Manufacturing Subcategory

- §410.80 Applicability; description of the nonwoven manufacturing subcategory.
- §410.81 Specialized definitions. [Reserved]
- §410.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.84 Pretreatment standards for existing sources (PSES).
- §410.85 New source performance standards (NSPS).
- §410.86 Pretreatment standards for new sources (PSNS).
- §410.87 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

Subpart I—Felted Fabric Processing Subcategory

- §410.90 Applicability; description of the felted fabric processing subcategory.
- §410.91 Specialized definitions. [Reserved]
- §410.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- §410.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- §410.94 Pretreatment standards for existing sources (PSES).
- §410.95 New source performance standards (NSPS).
- §410.96 Pretreatment standards for new sources (PSNS).

§410.97 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307 (b) and (c), and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the "Act"); 33 U.S.C. 1311, 1314 (b), (c), (e), and (g), 1316 (b) and (c), 1317 (b) and (c), and 1361; 86 Stat. 186 *et seq.*, Pub. L. 92-500; 91 Stat. 1567, Pub. L. 95-217.

SOURCE: 47 FR 38819, Sept. 2, 1982, unless otherwise noted.

[↑ Back to Top](#)

GENERAL PROVISIONS

[↑ Back to Top](#)

§410.00 Applicability.

This part applies to any textile mill or textile processing facility which discharges or may discharge process wastewater pollutants to the waters of the United States, or which introduces or may introduce process wastewater pollutants into a publicly owned treatment works.

[↑ Back to Top](#)

§410.01 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) *Sulfide* shall mean total sulfide (dissolved and acid soluble) as measured by the procedures listed in 40 CFR part 136.

(b) *Phenols* shall mean total phenols as measured by the procedure listed in 40 CFR part 136.

(c) Total Chromium shall mean hexavalent and trivalent chromium as measured by the procedures listed in 40 CFR part 136.

(d) The term *commission finishing* shall mean the finishing of textile materials, 50 percent or more of which are owned by others, in mills that are 51 percent or more independent (*i.e.*, only a minority ownership by company(ies) with greige or integrated operations); the mills must process 20 percent or more of their commissioned production through batch, noncontinuous processing operations with 50 percent or more of their commissioned orders processed in 5000 yard or smaller lots.

(e) The term *product*, except where a specialized definition is included in the subpart, shall mean the final material produced or processed at the mill.

[↑ Back to Top](#)

§410.02 Monitoring requirements. [Reserved]

[↑ Back to Top](#)

Subpart A—Wool Scouring Subcategory

[↑ Back to Top](#)

§410.10 Applicability; description of the wool scouring subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: wool scouring, topmaking, and general cleaning of raw wool.

[↑ Back to Top](#)

§410.11 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and §410.01 of this part, the following definitions apply to this subpart:

- (a) The term *wool* shall mean the dry raw wool as it is received by the wool scouring mill.
- (b) The term *oil and grease* shall mean total recoverable oil and grease as measured by the procedure listed in 40 CFR part 136.
- (c) The term *commission scouring* shall mean the scouring of wool, 50 percent or more of which is owned by others, in mills that are 51 percent or more independent (*i.e.*, only a minority ownership by company(ies) with greige or integrated operations); the mills must process 20 percent or more of their commissioned production through batch, noncontinuous processing operations.

[↑ Back to Top](#)

§410.12 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of wool	
BOD5	10.6	5.3
COD	138.0	69.0
TSS	32.2	16.1
Oil and grease	7.2	3.6
Sulfide	0.20	0.10

Phenol	0.10	0.05
Total chromium	0.10	0.05
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

(b) Additional allocations equal to the effluent limitations established in paragraph (a) of this section are allowed any existing point source subject to such effluent limitations that scours wool through “commission scouring” as defined in §410.11.

[↑ Back to Top](#)

§410.13 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of wool	
COD	138.0	69.0
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total chromium	0.10	0.05

(b) Additional allocations equal to the effluent limitations established in paragraph (a) of this section are allowed any existing point source subject to such effluent limitations that scours wool through “commission scouring” as defined in §410.11.

[↑ Back to Top](#)

§410.14 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.15 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of wool	
BOD5	3.6	1.9

COD	52.4	33.7
TSS	30.3	13.5
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total chromium	0.10	0.05
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

Note: Additional allocations for “commission scouring” are not available to new sources.

[↑ Back to Top](#)

§410.16 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.17 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

Subpart B—Wool Finishing Subcategory

[↑ Back to Top](#)

§410.20 Applicability; description of the wool finishing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: wool finishers, including carbonizing, fulling, dyeing, bleaching, rinsing, fireproofing, and other such similar processes.

[↑ Back to Top](#)

§410.21 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and §410.01 of this part, the following definition applies to this subpart:

(a) The term *fiber* shall mean the dry wool and other fibers as received at the wool finishing mill for processing into wool and blended products.

(b) [Reserved]

[↑ Back to Top](#)

§410.22 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pound per 1,000 lb) of fiber	
BOD5	22.4	11.2
COD	163.0	81.5
TSS	35.2	17.6
Sulfide	0.28	0.14
Phenol	0.14	0.07
Total chromium	0.14	0.07
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

(b) Additional allocations equal to the effluent limitations established in paragraph (a) of this section are allowed any existing point source subject to such effluent limitations that finishes wool or blended wool fabrics through “commission finishing” as defined in §410.01.

[↑ Back to Top](#)

§410.23 Effluent limitation representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitation	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of fiber	
COD	163.0	81.5
Sulfide	0.28	0.14
Phenols	0.14	0.07
Total Chromium	0.14	0.07

(b) Additional allocations equal to the effluent limitations established in paragraph (a) of this section are allowed any existing point source subject to such effluent limitations that finishes wool or blended wool fabrics through “commission finishing” as defined in §410.01.

[↑ Back to Top](#)

§410.24 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.25 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of fiber	
BOD ₅	10.7	5.5
COD	113.8	73.3
TSS	32.3	14.4
Sulfide	0.28	0.14
Phenols	0.14	0.07
Total Chromium	0.14	0.07
pH	(¹)	(¹)

Note: Additional allocations for “commission finishers” are not available to new sources.

¹Within the range 6.0 to 9.0 at all times.

[↑ Back to Top](#)

§410.26 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

**§410.27 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).
[Reserved]**

[↑ Back to Top](#)

Subpart C—Low Water Use Processing Subcategory

[↑ Back to Top](#)

§410.30 Applicability; description of the low water use processing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: yarn manufacture, yarn texturizing, unfinished fabric manufacture, fabric coating, fabric laminating, tire cord and fabric dipping, and carpet tufting

and carpet backing. Rubberized or rubber coated fabrics regulated by 40 CFR part 428 are specifically excluded.

[↑ Back to Top](#)

§410.31 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and §410.01 of this part, the following definitions apply to this subpart:

(a) The term *general processing* shall mean the internal subdivision of the low water use processing subcategory for facilities described in §410.30 that do not qualify under the water jet weaving subdivision.

(b) The term *water jet weaving* shall mean the internal subdivision of the low water use processing subcategory for facilities primarily engaged in manufacturing woven greige goods through the water jet weaving process.

[↑ Back to Top](#)

§410.32 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BPT):

GENERAL PROCESSING

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
BOD ₅	1.4	0.7
COD	2.8	1.4
TSS	1.4	0.7
ph	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

WATER JET WEAVING

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
BOD ₅	8.9	4.6
COD	21.3	13.7
TSS	5.5	2.5
ph	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

[⬆ Back to Top](#)

§410.33 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

GENERAL PROCESSING

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
COD	2.8	1.4

WATER JET WEAVING

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
COD	21.3	13.7

[⬆ Back to Top](#)

§410.34 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[⬆ Back to Top](#)

§410.35 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

GENERAL PROCESSING

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
BOD5	1.4	0.7
COD	2.8	1.4
TSS	1.4	0.7
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

WATER JET WEAVING

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
BOD5	8.9	4.6
COD	21.3	13.7
TSS	5.5	2.5
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

[↑ Back to Top](#)

§410.36 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.37 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

Subpart D—Woven Fabric Finishing Subcategory

[↑ Back to Top](#)

§410.40 Applicability; description of the woven fabric finishing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: woven fabric finishers, which may include any or all of the following unit operations: Desizing, bleaching, mercerizing, dyeing, printing, resin treatment, water proofing, flame proofing, soil repellency application and a special finish application.

[↑ Back to Top](#)

§410.41 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and §410.01 of this part the following definitions apply to this subpart:

(a) The term *simple manufacturing operation* shall mean all the following unit processes: Desizing, fiber preparation and dyeing.

(b) The term *complex manufacturing operation* shall mean “simple” unit processes (desizing, fiber preparation and dyeing) plus any additional manufacturing operations such as printing, water proofing, or applying stain resistance or other functional fabric finishes.

(c) For NSPS (§410.45) the term *desizing facilities* shall mean those facilities that desize more than 50 percent of their total production. These facilities may also perform other processing such as fiber preparation, scouring, mercerizing, functional finishing, bleaching, dyeing and printing.

[↑ Back to Top](#)

§410.42 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD5	6.6	3.3
COD	60.0	30.0
TSS	17.8	8.9
Sulfide	0.20	0.10
Phenol	0.10	0.05
Total Chromium	0.10	0.05
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

(b) Except as provided in paragraph (e) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of woven fabrics through simple manufacturing operations employing a synthetic fiber or through complex manufacturing operations employing a natural fiber, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
COD	20.0	10.0

(c) Except as provided in paragraph (e) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of woven fabrics through simple manufacturing operations employing a natural and synthetic fiber blend or through complex manufacturing operations employing a synthetic fiber, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
COD	40.0	20.0

(d) Except as provided in paragraph (e) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of woven fabrics through complex manufacturing operations employing a natural and synthetic fiber blend, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this subpart.

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pound per 1,000 lb) of product	
COD	60.0	30.0

(e) Additional allocations equal to the effluent limitations established in paragraphs (a), (b), (c), and (d) of this section are allowed any existing point source subject to such effluent limitations that finishes woven fabrics through “commission finishing” as defined in §410.01.

[47 FR 38819, Sept. 2, 1982, as amended at 48 FR 39624, Sept. 1, 1983]

[↑ Back to Top](#)

§410.43 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pound per 1,000 lb) of product	
COD	60.0	30.0
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total Chromium	0.10	0.05

(b) Except as provided in paragraph (e) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of woven fabrics through simple manufacturing operations employing a synthetic fiber or through complex manufacturing operations employing a natural fiber, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	20.0	10.0

(c) Except as provided in paragraph (e) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of woven fabrics through simple manufacturing operations employing a natural and synthetic fiber blend or through complex manufacturing operations employing a synthetic fiber, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	40.0	20.0

(d) Except as provided in paragraph (e) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of woven fabrics through complex manufacturing operations employing a natural and synthetic fiber blend, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this subpart.

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	60.0	30.0

(e) Additional allocations equal to the effluent limitations established in paragraphs (a), (b), (c), and (d) of this section are allowed any existing point source subject to such effluent limitations that finishes woven fabrics through “commission finishing” as defined in §410.01.

[47 FR 38819, Sept. 2, 1982, as amended at 48 FR 39624, Sept. 1, 1983]

[↑ Back to Top](#)

§410.44 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.45 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

SIMPLE MANUFACTURING OPERATIONS

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
BOD ₅	3.3	1.7
COD	41.7	26.9
TSS	8.8	3.9
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total Chromium	0.10	0.05
pH ¹	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

Note: Additional allocations for “commission finishers” are not available to new sources.

COMPLEX MANUFACTURING OPERATIONS

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
BOD ₅	3.7	1.9
COD	68.7	44.2
TSS	14.4	6.4
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total Chromium	0.10	0.05
pH ¹	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

Note: Additional allocations for “commission finishers” are not available to new sources.

DESIZING

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
BOD ₅	5.5	2.8

COD	59.5	38.3
TSS	15.6	6.9
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total Chromium	0.10	0.05
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

NOTE: Additional allocations for “commission finishers” are not available to new sources.

[⬆ Back to Top](#)

§410.46 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[⬆ Back to Top](#)

§410.47 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[⬆ Back to Top](#)

Subpart E—Knit Fabric Finishing Subcategory

[⬆ Back to Top](#)

§410.50 Applicability; description of the knit fabric finishing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: knit fabric finishers, which may include any or all of the following unit operations: Bleaching, mercerizing, dyeing, printing, resin treatment, water proofing, flame proofing, soil repellency application and a special finish application.

[⬆ Back to Top](#)

§410.51 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and §410.01 of this part, the following definitions apply to this subpart:

(a) The term *simple manufacturing operation* shall mean all the following unit processes: desizing, fiber preparation and dyeing.

(b) The term *complex manufacturing operation* shall mean “simple” unit processes (desizing, fiber preparation and dyeing) plus any additional manufacturing operations such as printing, water proofing, or applying stain resistance or other functional fabric finishes.

(c) For NSPS (§410.55) the term *hosiery products* shall mean the internal subdivision of the knit fabric finishing subcategory for facilities that are engaged primarily in dyeing or finishing hosiery of any type.

[⬆ Back to Top](#)

§410.52 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD5	5.0	2.5
COD	60.0	30.0
TSS	21.8	10.9
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total chromium	0.10	0.05
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

(b) Except as provided in paragraph (d) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of knit fabrics through simple manufacturing operations employing a natural and synthetic fiber or through complex manufacturing operations employing a synthetic fiber, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
COD	20.0	10.0

(c) Except as provided in paragraph (d) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of knit fabrics through complex manufacturing operations employing a natural and synthetic fiber blend, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	

	kg/kg (or pounds per 1,000 lb) of product	
COD	40.0	20.0

(d) Additional allocations equal to the effluent limitations established in paragraphs (a), (b), and (c) of this section are allowed any existing point source subject to such effluent limitations that finishes knit fabrics through “commission finishing” as defined in §410.01.

[47 FR 38819, Sept. 2, 1982, as amended at 48 FR 39624, Sept. 1, 1983]

[↑ Back to Top](#)

§410.53 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	60.0	30.0
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total Chromium	0.10	0.05

(b) Except as provided in paragraph (d) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of knit fabrics through simple manufacturing operations employing a natural and synthetic fiber or through complex manufacturing operations employing a synthetic fiber, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	20.0	10.0

(c) Except as provided in paragraph (d) of this section for commission finishing operations, the following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the finishing of knit fabrics through complex manufacturing operations employing a natural and synthetic fiber blend, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	40.0	20.0

(d) Additional allocations equal to the effluent limitations established in paragraphs (a), (b), and (c) of this section are allowed any existing point source subject to such effluent limitations that finishes knit fabrics through “commission finishing” as defined in §410.01.

[47 FR 38819, Sept. 2, 1982, as amended at 48 FR 39624, Sept. 1, 1983]

[⬆ Back to Top](#)

§410.54 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[⬆ Back to Top](#)

§410.55 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

SIMPLE MANUFACTURING OPERATIONS

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD5	3.6	1.9
COD	48.1	31.0
TSS	13.2	5.9
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total chromium	0.10	0.05
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

NOTE: Additional allocations for “commission finishers” are not available to new sources.

COMPLEX MANUFACTURING OPERATIONS

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD5	4.8	2.5
COD	51.0	32.9
TSS	12.2	5.4
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total Chromium	0.10	0.05
pH	(¹⁻)	(¹⁻)

¹Within the range 6.0 to 9.0 at all times.

NOTE: Additional allocations for “commission finishers” are not available to new sources.

HOSIERY PRODUCTS

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
BOD ₅	2.3	1.2
COD	30.7	19.8
TSS	8.4	3.7
Sulfide	0.20	0.10
Phenols	0.10	0.05
Total Chromium	0.10	0.05
pH	(¹ –)	(¹ –)

¹Within the range 6.0 to 9.0 at all times.

NOTE: Additional allocations for “commission finishers” are not available to new sources.

[↑ Back to Top](#)

§410.56 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.57 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

Subpart F—Carpet Finishing Subcategory

[↑ Back to Top](#)

§410.60 Applicability; description of the carpet finishing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: carpet mills, which may include any or all of the following unit operations: Bleaching, scouring, carbonizing, fulling, dyeing, printing, resin treatment, waterproofing, flameproofing, soil repellency, looping, and backing with foamed and unfoamed latex and jute. Carpet backing without other carpet manufacturing operations is included in subpart C.

[↑ Back to Top](#)

§410.61 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401 and §410.01 of this part, the following definitions apply to this subpart:

(a) The term *product* shall mean the final carpet produced or processed including the primary backing but excluding the secondary backing.

(b) The term *simple manufacturing operation* shall mean the following unit processes: fiber preparation and dyeing with or without carpet backing.

(c) The term *complex manufacturing operation* shall mean “simple” unit processes (fiber preparation, dyeing and carpet backing) plus any additional manufacturing operations such as printing or dyeing and printing.

[Back to Top](#)

§410.62 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD5	7.8	3.9
COD	70.2	35.1
TSS	11.0	5.5
Sulfide	0.08	0.04
Phenol	0.04	0.02
Total Chromium	0.04	0.02
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the manufacture of carpets through complex manufacturing operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
COD	20.0	10.0

[Back to Top](#)

§410.63 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	70.2	35.1
Sulfide	0.08	0.04
Phenols	0.04	0.02
Total chromium	0.04	0.02

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section and attributable to the manufacture of carpets through complex manufacturing operations, which may be discharged by a point source subject to the provisions of this subpart, in addition to the discharge allowed by paragraph (a) of this section.

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (or pounds per 1,000 lb) of product	
COD	20.0	10.0

[↑ Back to Top](#)

§410.64 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.65 New source performance standards (NSPS).

Any new source subject to this subject must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	kg/kg (or pounds per 1,000 lb) of product	
BOD5	4.6	2.4
COD	26.6	17.1
TSS	8.6	3.8
Sulfide	0.08	0.04
Phenols	0.04	0.02
Total chromium	0.04	0.02
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

NOTE: Additional allocations for “commission finishers” are not available to new sources.

[↑ Back to Top](#)

§410.66 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.67 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

Subpart G—Stock and Yarn Finishing Subcategory

[↑ Back to Top](#)

§410.70 Applicability; description of the stock and yarn finishing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from the following types of textile mills: Stock or yarn dyeing or finishing, which may include any or all of the following unit operations and processes: Cleaning, scouring, bleaching, mercerizing, dyeing and special finishing.

[↑ Back to Top](#)

§410.71 Specialized definitions. [Reserved]

[↑ Back to Top](#)

§410.72 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD ₅	6.8	3.4
COD	84.6	42.3
TSS	17.4	8.7

Sulfide	0.24	0.12
Phenol	0.12	0.06
Total chromium	0.12	0.06
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

(b) [Reserved]

[Back to Top](#)

§410.73 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
COD	84.6	42.3
Sulfide	0.24	0.12
Phenols	0.12	0.06
Total chromium	0.12	0.06

[Back to Top](#)

§410.74 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[Back to Top](#)

§410.75 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (or pounds per 1,000 lb) of product	
BOD ₅	3.6	1.9
COD	33.9	21.9
TSS	9.8	4.4
Sulfide	0.24	0.12
Phenols	0.12	0.06
Total chromium	0.12	0.06
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

NOTE: Additional allocations for “commission finishers” are not available to new sources.

[↑ Back to Top](#)

§410.76 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.77 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

Subpart H—Nonwoven Manufacturing Subcategory

[↑ Back to Top](#)

§410.80 Applicability; description of the nonwoven manufacturing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from facilities that primarily manufacture nonwoven textile products of wool, cotton, or synthetics, singly or as blends, by mechanical, thermal, and/or adhesive bonding procedures. Nonwoven products produced by fulling and felting processes are covered in subpart I—Felted Fabric Processing.

[↑ Back to Top](#)

§410.81 Specialized definitions. [Reserved]

[↑ Back to Top](#)

§410.82 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD ₅	4.4	2.2
COD	40.0	20.0

TSS	6.2	3.1
Sulfide	0.046	0.023
Phenol	0.023	0.011
Total chromium	0.023	0.011
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0 at all times.

[↑ Back to Top](#)

§410.83 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
COD	40.0	20.0
Sulfide	0.046	0.023
Phenols	0.023	0.011
Total chromium	0.023	0.011

[↑ Back to Top](#)

§410.84 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.85 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD5	2.6	1.4
COD	15.2	9.8
TSS	4.9	2.2
Sulfide	0.046	0.023
Phenols	0.023	0.011
Total Chromium	0.023	0.011
pH	(¹)	(¹)

¹ Within the range 6.0 to 9.0 at all times.

NOTE: Additional allocations for “commission finishers” are not available to new sources.

[↑ Back to Top](#)

§410.86 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[↑ Back to Top](#)

§410.87 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

[↑ Back to Top](#)

Subpart I—Felted Fabric Processing Subcategory

[↑ Back to Top](#)

§410.90 Applicability; description of the felted fabric processing subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from facilities that primarily manufacture nonwoven products by employing fulling and felting operations as a means of achieving fiber bonding.

[↑ Back to Top](#)

§410.91 Specialized definitions. [Reserved]

[↑ Back to Top](#)

§410.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD ₅	35.2	17.6
COD	256.8	128.4
TSS	55.4	27.7
Sulfide	0.44	0.22
Phenol	0.001	0.001

Phenol	0.22	0.11
Total chromium	0.22	0.11
pH	(¹)	(¹)

¹Within the range 6.0 to 9.0.

[Back to Top](#)

§410.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT):

Pollutant or pollutant property	BAT limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
COD	256.8	128.4
Sulfide	0.44	0.22
Phenols	0.22	0.11
Total Chromium	0.22	0.11

[Back to Top](#)

§410.94 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[Back to Top](#)

§410.95 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following new source performance standards (NSPS):

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (or pounds per 1,000 lb) of product	
BOD ₅	16.9	8.7
COD	179.3	115.5
TSS	50.9	22.7
Sulfide	0.44	0.22
Phenols	0.22	0.11
Total Chromium	0.22	0.11
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0 at all times.

Note: Additional allocations for “commission finishers” are not available to new sources

Note: Additional allocations for "commission finishers" are not available to new sources.

[⬆️ Back to Top](#)

§410.96 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

[⬆️ Back to Top](#)

§410.97 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT).

[Reserved]

[⬆️ Back to Top](#)

[Need assistance?](#)

Appendix B – Wasteload Allocation

National Pollutant Discharge Elimination System Wasteload Allocation Form

Part I: Background Information

WLA Request Type: Reliance ☒ Expansion ☐ Relocation ☐ New Discharge ☐ Modification ☐
 Facility Name: King America Finishing WPCP County: Screven WQMU: 0291
 NPDES Permit No.: GA0003280 Expiration Date: 11/30/2018 Outfall Number: 001
 Receiving Water: Ogeechee River River Basin: Ogeechee River 10-Digit HUC: 0306020203
 Discharge Type: Domestic ☐ Industrial ☒ Both ☐ Proportion (D:I): Flow(s) Requested (MGD): 3.1
 Industrial Contributions Type(s): Preparation, dyeing, and finishing of woven cotton synthetic/cotton blended fabrics
 Treatment Process Description: Manual bar screening, neutralization, activated sludge, sedimentation, cloth media filter, granulated activated carbon; sludge lagoons, landfill
 Additional Information: (history, special conditions, other facilities): In 2015, the facility redirected all sanitary sewage from the wastewater treatment plant to a newly installed septic tank system.
 Requested by: Ian McDowell Title: EE Program: WRP
 Telephone: 404 - 252 - 1557 Date: 5/2/2018

Part II: Receiving Water Information

Receiving Water: Ogeechee River Designated Use Classification: Fishing
 Integrated 305(b)/303(d) List: Yes ☒ No ☐ Partial Support: ☐ Not Support: ☒ Criteria: TWR
 Total Maximum Daily Load: Yes ☒ No ☐ Parameter(s): Mercury (Hg) WLA Complies with TMDL Yes ☒ No ☐
 EPA 2005 TMDL for Total Mercury Fish Tissue in Ogeechee River assigned a Total Hg concentration of 6.0 ng/L to the facility. 2013 WLA recommended the facility to conduct a mercury characterization or minimization study. King America performed a six month influent and effluent Hg monitoring and submitted a report in 2014. The data indicated average Hg concentration was 0.73 ng/L in source water and <0.50 ng/L in final effluent. Since these levels were well below the 6.0 ng/L threshold, no Hg minimization plan was required.

Part III: Water Quality Model Review Information

Model Type: Uncalibrated ☐ Calibrated ☒ Verified ☐ Cannot be Modeled ☐ Model Length (mi): 96
 Field Data: None ☐ Fair ☒ Good ☐ Excellent ☐
 Model and Field Data Description: Steady-state dissolved oxygen Georgia DOSAG model
 Critical Water Temperature (°C): 28 Drainage Area (mi²): 2129 Mean annual streamflow at discharge (cfs): 1767
 7Q10 Yield (cfs/mi²): 0.044 Velocity (range fps): 0.5 - 0.6 30Q3 streamflow at discharge (cfs): 213
 Effluent Flow Rate (cfs): 4.8 IWC (%): 4.9 7Q10 streamflow at discharge (cfs): 94
 Slope (range - fpm): 0.3 - 2.4 K1: 0.02 K3: 0.06 K2: 0.2 - 1.0 1Q10 streamflow at discharge (cfs): 89
 SOD: 0.6 Escape Coef. (ft⁻¹): 0.054 f-Ratio BOD_u/BOD₅: 2 Background Hardness (as CaCO₃)(mg/L): 35
 The predicted minimum dissolved oxygen is 5.5 mg/L, occurring 5 to 7 miles downstream from the discharge location. The streamflow information has been updated referencing USGS flow station 02202500 (1937-2018), Ogeechee River at U.S. Hwy 80 near Eden, approx. 58 miles downstream from the discharge outfall. Hardness value is calculated from the facility's instream monitoring data (2013-2018).

Part IV: Recommended Permit Limitations and Conditions (lbs/day as a daily average except as noted)

Rationale: Same as current ☐ Revised ☒ New ☐
 Location: Ogeechee River

Effluent Flow Rate (MGD)	BOD ₅	Ammonia (mg/L)	DO (minimum) (mg/L)	pH (std. units)	**Fecal Coliform (No./100ml)	Total Phosphorus (mg/L)	TKN (mg/L)	Nitrite-Nitrate (mg/L)	Organic Nitrogen (mg/L)
Monitor	776	7.0	5.0	6.0 - 9.0	200	Monitor	Monitor	Monitor	Monitor

Additional Comments:

- Priority pollutant permit limits, aquatic toxicity testing requirements, and other parameters required by categorical effluent guidelines or identified during review of permit application are to be determined by WRP.
- *The BOD₅ load of 776 lbs/d equivalents to 30 mg/L.
- **Fecal Coliform limit is recommended based on presence of fecal in the facility's DMR data.
- Current ammonia limit meets the U.S. EPA's Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013 under the 7Q10 stream flow condition.
- Effluent monitoring of TKN, nitrate-nitrite, and organic nitrogen is recommended. Those nitrogen constituents should be analyzed from the same effluent sample. Organic nitrogen should be calculated as TKN minus NH₄.
- Effluent monitoring for Ortho-P has been removed after reviewing of effluent phosphorus data (2013-2018). The results have shown an approximately 10% of Total-P in the facility's effluent is Ortho-P.

Prepared by: Lucy Sun Date: 5/21/2018 Reviewed by: Josh Waite Date: 10-20-18

Part V: Program Manager Comments

Elizabeth A. Booth

Elizabeth Booth

Date: 7/20/18

Appendix C – Reasonable Potential Analysis

Reasonable Potential Analysis for Freshwater

Permit Name: King America Finishing, Inc.

NPDES Permit No.: GA0003280

Stream Data:

Receiving stream Hardness:	35	mg/L
Upstream TSS:	10	mg/L
7Q10:	94	ft ³ /s
	60,749,568	gal/day
1Q10:	89	ft ³ /s
	57,518,208	gal/day

Effluent Data:

Flow	3,100,000	gal/day
TSS	59	mg/L

Instream TSS: 12.38 mg/L

Acute Dilution factor: 19.55

Chronic Dilution factor: 20.60

Water Quality Criteria:

Mean annual streamflow at discharge:	1,767	ft ³ /s
	1,141,962,624	gal/day
Dilution factor:	369.375	
IWC	4.855162058	

$$IWC = \frac{Flow \left(\frac{gal}{day} \right)}{Flow \left(\frac{gal}{day} \right) + 7Q10 \left(\frac{gal}{day} \right)}$$

Acute Water Quality Criteria (WQC_{Acute})

Metal	K _{PO}	α	f _D	Maximum effluent C _T (μg/L)	Instream C _D (μg/L)	WQC _{Acute} (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.51	78	2.05	340.00	no
Cadmium	4.00.E+06	-1.131	0.000	0	0.00	0.72	no
Chromium III	3.36.E+06	-0.930	0.00	0	0.00	241.15	no
Chromium VI	3.36.E+06	-0.930	0.00	0	0.00	16.00	no
Copper	1.04.E+06	-0.744	0.34	10	0.17	5.00	no
Lead	2.80.E+06	-0.800	0.00	0	0.00	20.25	no
Mercury	NA	NA	NA	0.0013	0.0001	1.40	no
Nickel	4.90.E+05	-0.572	0.00	0	0.00	192.64	no
Zinc	1.25.E+06	-0.704	0.28	241	3.39	48.14	no

$$Acute \text{ Dilution Factor} = \frac{1Q10 \left(\frac{gal}{day} \right) + Flow \left(\frac{gal}{day} \right)}{Flow \left(\frac{gal}{day} \right)}$$

Chronic Water Quality Criteria (WQC_{Chronic})

Metal	K _{PO}	α	f _D	Average effluent C _T (μg/L)	Instream C _D (μg/L)	WQC _{Chronic} (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.51	78	1.94	150.00	no
Cadmium	4.00.E+06	-1.131	0.000	0	0.00	0.12	no
Chromium III	3.36.E+06	-0.930	0.00	0	0.00	31.37	no
Chromium VI	3.36.E+06	-0.930	0.00	0	0.00	11.00	no
Copper	1.04.E+06	-0.744	0.34	10	0.16	3.65	no
Lead	2.80.E+06	-0.800	0.00	0	0.00	0.79	no
Mercury	NA	NA	NA	0.0013	0.0001	0.012	no
Nickel	4.90.E+05	-0.572	0.00	0	0.00	21.40	no
Zinc	1.25.E+06	-0.704	0.28	241	3.22	48.54	no
Selenium	NA	NA	NA	0	0.00	5.00	no

$$f_D = \frac{1}{1 + K_{PO} \times TSS_{instream} (mg/L)^{(1+\alpha)} \times 10^{-6}}$$

$$Instream \ C_D = \frac{Effluent \ C_T (mg/L) \times f_D}{DF} \quad mg/L$$

$$Chronic \text{ Dilution Factor} = \frac{7Q10 \left(\frac{gal}{day} \right) + Flow \left(\frac{gal}{day} \right)}{Flow \left(\frac{gal}{day} \right)}$$

Human Health Water Quality Criteria (WQC_{Human Health})

Metal	K _{PO}	α	f _D	Maximum effluent C _T (μg/L)	Instream C _D (μg/L)	WQC _{Chronic} (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.51	78	0.11	50.00	no

Total Recoverable Effluent Limit

Metal	C _S (μg/L)	Chronic C _T (μg/L) 30-Day Avg	Chronic C _T (lbs/day) 30-Day Avg	Acute C _T (μg/L) Daily Max	Acute C _T (lbs/day) Daily Max
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	N/A	N/A	N/A	N/A
Chromium III	0.0	N/A	N/A	N/A	N/A
Chromium VI	0.0	N/A	N/A	N/A	N/A
Copper	0.0	N/A	N/A	N/A	N/A
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A
Selenium	0.0	N/A	N/A	--	--

NOTES:

- (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33:
- (2) Assuming background dissolved metal concentration (C_S) in the stream is 0 μg/L, equations above become:

NOTES:

*Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.

$$(1) \quad Acute \ C_T = \frac{\frac{WQC_{Acute} \times (Q_E + 1Q10) - (1Q10 \times C_S)}{f_D}}{Q_E}$$

$$Chronic \ C_T = \frac{\frac{WQC_{Chronic} \times (Q_E + 7Q10) - (7Q10 \times C_S)}{f_D}}{Q_E}$$

$$(2) \quad Acute \ C_T = \frac{\frac{WQC_{Acute} \times (Q_E + 1Q10)}{f_D}}{Q_E}$$

$$Chronic \ C_T = \frac{\frac{WQC_{Chronic} \times (Q_E + 7Q10)}{f_D}}{Q_E}$$

End of report

Reasonable Potential Analysis for Freshwater

Permit Name: King America Finishing, Inc.
NPDES Permit No.: GA0003280

Stream Data:

Receiving stream Hardness: 35 mg/L
Upstream TSS: 10 mg/L
7Q10: 94 ft³/s
60,749,568 gal/day
1Q10: 89 ft³/s
57,518,208 gal/day

Effluent Data:

Flow: 3,100,000 gal/day
TSS: 59 mg/L
Instream TSS: 12.38 mg/L
Acute Dilution factor: 19.55
Chronic Dilution factor: 20.60

Water Quality Criteria:

mean annual streamflow at discharge: 1,767 ft³/s
1,141,962,624 gal/day
Dilution factor: 369.375

Water Quality Criteria (WQC)

Nonmetal	Effluent Concentration (µg/L)	Instream Concentration (µg/L)	WQC (µg/L)	WQC/2 (µg/L)	Action needed?
Cyanide (Chronic)	18.0	0.87	5	2.6	no
Phenols (Chronic)	46.00	2.23	300	150	no
Phenols (Human Health)	150.0	0.41	857000	428500	no

NOTES:

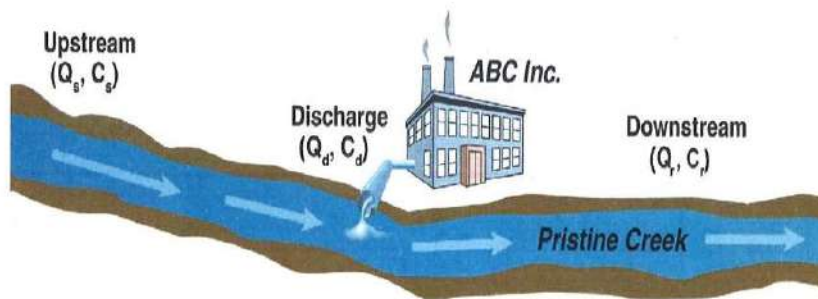
*Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.

End of report

Ammonia Reasonable Potential Analysis

General Information		
Facility	King America Finishing, Inc.	
Permit #	GA0003280	
Staff	McDowell	
Date	23.May.19	
Upstream Conditions		Basis
Flow, Q_s	213.00 cfs	Qstream (30Q3) as determined by WPMP
Concentration, C_s	0.03 mg/L	background concentration generally ~0.13 mg/L or as specified by WPMP
Discharge Characteristics		Basis
Flow, Q_d	2.770 MGD	effluent flow rate
Flow, Q_d	4.29 cfs	effluent flow rate
Concentration, C_d	7.00 mg/L	permitted daily average concentration
IWC	2.0 %	instream waste concentration
Predicted Downstream		Basis
Flow, Q_r	217.29 cfs	calculated combined flow
Concentration, C_r	0.17 mg/L	calculated instream concentration
Applicable Criteria	1.08 mg/L	instream toxicity criteria as determined by WPMP
Ratio	16 %	predicted instream concentration as % of criteria
RP	No	is there reasonable potential to exceed criteria?
Action	None	what is appropriate permitting action?

Exhibit 6-14 Example of applying mass-balance equation to conduct reasonable potential analysis for conservative pollutant under conditions of rapid and complete mixing



$$\text{Mass-Balance Equation: } Q_s C_s + Q_d C_d = Q_r C_r$$

Dividing both sides of the mass-balance equation by Q_r gives the following:

$$C_r = \frac{(Q_d)(C_d) + (Q_s)(C_s)}{Q_r}$$

Appendix D – Performance-Based Reductions

Performance-Based Reductions of NPDES Permit Monitoring Frequencies

King America Finishing, Inc.
GA0003280

	Permit Requirements			Monitoring Data			Compliance History		Performance History			
Parameter	Baseline Monitoring	Monthly Average Limit ¹ (lbs/day)	Monthly Average Limit ¹ (mg/L)	Time Period	Long Term Average (lbs/day)	Long Term Average (mg/L)	# of SNCs in the Past 2 Years	# of Violations in the Past Year	Ratio (Mass)	Ratio (Conc.)	Most Stringent Ratio	Proposed Monitoring
BOD ₅	5/Week	323	30	4/1/2017 - 04/01/2019	93	6	0	0	29%	20%	29%	5/Week ²
COD	5/Week	5,328	--	4/1/2017 - 04/01/2019	3410	--	0	0	64%	--	64%	3/Week
TSS	5/Week	650	--	4/1/2017 - 04/01/2019	91	6	0	0	14%	--	14%	1/Week
Sulfide	7/Week	9.8	1.5	4/1/2017 - 04/01/2019	3.20	0.20	0	0	33%	14%	33%	3/Week
Total Ammonia	7/Week	181	7	4/1/2017 - 04/01/2019	23.91	1.55	0	5	13%	22%	22%	7/Week
Total Phenols	1/Week	4.9	--	4/1/2017 - 04/01/2019	0.3	--	0	0	5%	--	5%	1/2Mos
Total Chromium	1/Week	4.9	--	4/1/2017 - 04/01/2019	0.16	0.01	0	0	3%	--	3%	1/2Mos

¹ The monthly average limits are from the proposed draft permit

² The monitoring frequency of BOD₅ has not been reduced as historical data occasionally exceeded the proposed daily maximum effluent limitations

<https://www3.epa.gov/npdes/pubs/perf-red.pdf>

Appendix E – WET Testing Results

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

Date	Effluent Data				In-Stream Data (25 feet downstream)		
	Acute Whole Effluent Toxicity		Chronic Whole Effluent Toxicity		Acute Whole Effluent Toxicity		Chronic Whole Effluent Toxicity
	<i>Ceriodaphnia dubia</i>	<i>Pimephales Promelas</i>	<i>Ceriodaphnia dubia</i>	<i>Pimephales Promelas</i>	<i>Ceriodaphnia dubia</i>	<i>Pimephales Promelas</i>	<i>Ceriodaphnia dubia</i>
12/1/2013	100	--	--	--	--	--	--
12/3/2013	100	--	--	--	--	--	--
12/5/2013	100	--	--	--	100	--	--
12/10/2013	100	--	--	--	--	--	--
12/12/2013	100	100	6	--	--	100	--
12/13/2013	--	--	--	100	--	--	100
12/16/2013	100	--	--	--	--	--	--
12/18/2013	100	--	--	--	--	--	--
12/23/2013	100	--	--	--	--	--	--
12/27/2013	100	--	--	--	--	--	--
1/1/2014	100	--	--	--	--	--	--
1/3/2014	100	--	65	--	--	--	--
1/6/2014	100	--	--	--	100	--	--
1/8/2014	100	--	--	--	--	--	--
1/10/2014	--	--	25	--	--	--	100
1/13/2014	100	--	--	--	--	--	--
1/15/2014	100	--	--	--	--	--	--
1/20/2014	100	--	--	--	--	--	--
1/22/2014	100	--	--	--	--	--	--
1/27/2014	100	--	--	--	--	--	--
1/30/2014	100	--	--	--	--	--	--
2/3/2014	50	--	--	--	100	--	--
2/6/2014	100	--	--	--	--	--	--
2/10/2014	60	--	--	--	100	--	--
2/13/2014	100	--	--	--	--	--	--
2/17/2014	52	--	--	--	--	--	--
2/19/2014	40	--	--	--	--	--	--
2/21/2014	--	--	6	--	100	--	100
2/24/2014	100	--	--	--	100	--	--
2/25/2014	100	--	--	--	100	--	--
2/26/2014	100	--	--	--	100	--	--
2/27/2014	100	--	--	--	100	--	--
2/28/2014	100	--	50	--	100	--	--
3/1/2014	100	--	--	--	100	--	--
3/2/2014	100	--	--	--	100	--	--
3/3/2014	100	--	80	--	100	100	100
3/4/2014	100	--	--	--	100	--	--
3/5/2014	100	--	--	--	100	--	--
3/10/2014	100	100	--	50	--	--	--
3/13/2014	100	--	--	--	--	--	--
3/17/2014	100	--	--	--	--	--	--
3/19/2014	100	--	--	--	--	--	--
3/24/2014	100	--	--	--	--	--	--
3/26/2014	100	--	--	--	--	--	--
3/31/2014	100	--	--	--	--	--	--
4/1/2014	--	--	25	--	--	--	100
4/2/2014	100	--	--	--	100	--	--
4/7/2014	100	--	--	--	--	--	--
4/9/2014	100	--	--	--	--	--	--
4/14/2014	100	--	--	--	--	--	--
4/16/2014	100	--	--	--	--	--	--
4/21/2014	100	--	--	--	--	--	--
4/23/2014	100	--	--	--	--	--	--
4/28/2014	100	--	--	--	--	--	--
4/30/2014	100	--	--	--	--	--	--
5/5/2014	100	--	80	--	100	--	100
5/7/2014	100	--	--	--	--	--	--
5/12/2014	100	--	--	--	--	--	--
5/14/2014	100	--	--	--	--	--	--
5/19/2014	100	--	--	--	--	--	--
5/21/2014	100	--	--	--	--	--	--
5/27/2014	100	--	--	--	--	--	--
5/28/2014	100	--	--	--	--	--	--
6/2/2014	100	--	74	--	--	--	100
6/3/2014	100	--	--	--	--	--	--
6/4/2014	100	--	--	--	100	100	--
6/5/2014	100	--	--	--	--	--	--
6/6/2014	100	--	--	--	--	--	--
6/7/2014	100	--	--	--	--	--	--
6/8/2014	100	--	--	--	--	--	--
6/9/2014	100	--	84	100	--	--	100
6/10/2014	100	--	--	--	--	--	--
6/11/2014	100	--	--	--	100	--	--
6/12/2014	100	--	--	--	--	--	--
6/13/2014	100	--	--	--	--	--	--
6/14/2014	100	--	--	--	--	--	--
6/15/2014	100	--	--	--	--	--	--
6/16/2014	100	--	46	--	--	--	100
6/17/2014	100	--	--	--	--	--	--
6/18/2014	100	--	--	--	--	--	--
6/19/2014	100	--	--	--	--	--	--
6/20/2014	100	100	--	--	100	--	--
6/21/2014	100	--	--	--	--	--	--
6/22/2014	100	--	--	--	--	--	--
6/23/2014	100	--	52	--	--	--	100
6/24/2014	100	--	--	--	--	--	--
6/25/2014	100	--	--	--	100	--	--
6/26/2014	100	--	--	--	--	--	--
6/27/2014	100	--	--	--	--	--	--
6/28/2014	100	--	--	--	--	--	--
6/29/2014	100	--	--	--	--	--	--
6/30/2014	100	--	--	--	--	--	--
7/1/2014	100	--	--	--	--	--	--
7/2/2014	100	--	--	--	100	--	--
7/3/2014	100	--	--	--	--	--	--
7/4/2014	100	--	--	--	--	--	--
7/5/2014	100	--	--	--	--	--	--
7/6/2014	100	--	--	--	--	--	--
7/7/2014	51	--	6	--	--	--	100
7/8/2014	54	--	--	--	--	--	--
7/9/2014	100	--	65	--	100	--	--
7/10/2014	100	--	--	--	--	--	--
7/11/2014	100	--	--	--	--	--	--
7/12/2014	100	--	--	--	--	--	--
7/13/2014	100	--	--	--	--	--	--
7/14/2014	100	--	25	--	100	--	100

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

7/15/2014	100	--	--	--	--	--	--
7/16/2014	100	--	--	--	--	--	--
7/17/2014	100	--	--	--	--	--	--
7/18/2014	100	--	--	--	--	--	--
7/19/2014	100	--	--	--	--	--	--
7/20/2014	100	--	--	--	--	--	--
7/21/2014	100	--	50	--	100	--	100
7/22/2014	100	--	--	--	--	--	--
7/23/2014	100	--	--	--	100	--	--
7/24/2014	100	--	--	--	--	--	--
7/25/2014	100	--	--	--	--	--	--
7/26/2014	100	--	--	--	--	--	--
7/27/2014	85	--	--	--	--	--	--
7/28/2014	100	--	65	--	--	--	100
7/29/2014	100	--	--	--	--	--	--
7/30/2014	100	--	--	--	100	--	--
7/31/2014	100	--	--	--	100	--	--
8/1/2014	100	--	--	--	100	--	--
8/2/2014	100	--	--	--	--	--	--
8/3/2014	100	--	--	--	--	--	--
8/4/2014	100	--	50	--	--	--	100
8/5/2014	100	--	--	--	--	--	--
8/6/2014	100	--	--	--	100	--	--
8/7/2014	19	--	--	--	--	--	--
8/8/2014	100	--	--	--	--	--	--
8/9/2014	100	--	--	--	--	--	--
8/10/2014	100	--	--	--	--	--	--
8/11/2014	100	--	65	--	--	--	100
8/12/2014	100	--	--	--	--	--	--
8/13/2014	100	--	--	--	100	--	--
8/14/2014	100	--	--	--	--	--	--
8/15/2014	100	--	--	--	--	--	--
8/16/2014	100	--	--	--	--	--	--
8/17/2014	100	--	--	--	--	--	--
8/18/2014	100	--	65	--	--	--	100
8/19/2014	100	--	--	--	--	--	--
8/20/2014	100	--	--	--	100	--	--
8/21/2014	100	--	--	--	--	--	--
8/22/2014	100	--	--	--	--	--	--
8/23/2014	100	--	--	--	--	--	--
8/24/2014	100	--	--	--	--	--	--
8/25/2014	100	--	25	--	--	--	100
8/26/2014	100	--	--	--	--	--	--
8/27/2014	100	--	--	--	100	--	--
8/28/2014	100	--	--	--	--	--	--
8/29/2014	100	--	--	--	--	--	--
8/30/2014	100	--	--	--	--	--	--
8/31/2014	100	--	--	--	--	--	--
9/1/2014	100	--	65	--	--	--	100
9/2/2014	100	--	--	--	--	--	--
9/3/2014	100	--	--	--	100	100	--
9/4/2014	100	--	--	--	--	--	--
9/5/2014	100	--	--	--	--	--	--
9/6/2014	100	--	--	--	--	--	--
9/7/2014	100	--	--	--	--	--	--
9/8/2014	100	--	65	100	--	--	100
9/9/2014	100	--	--	--	--	--	--
9/10/2014	100	100	--	--	100	--	--
9/11/2014	100	--	--	--	--	--	--
9/12/2014	100	--	--	--	--	--	--
9/13/2014	100	--	--	--	--	--	--
9/14/2014	100	--	--	--	--	--	--
9/15/2014	100	--	50	--	--	--	100
9/16/2014	100	--	--	--	--	--	--
9/17/2014	100	--	--	--	100	--	--
9/18/2014	100	--	--	--	--	--	--
9/19/2014	100	--	--	--	--	--	--
9/20/2014	100	--	--	--	--	--	--
9/21/2014	100	--	--	--	--	--	--
9/22/2014	100	--	50	--	--	--	100
9/23/2014	100	--	--	--	--	--	--
9/24/2014	100	--	--	--	100	--	--
9/25/2014	100	--	--	--	--	--	--
9/26/2014	100	--	--	--	--	--	--
9/27/2014	100	--	--	--	--	--	--
9/28/2014	100	--	--	--	--	--	--
9/29/2014	100	--	65	--	--	--	100
9/30/2014	100	--	--	--	--	--	--
10/1/2014	100	--	--	--	100	--	--
10/2/2014	100	--	--	--	--	--	--
10/3/2014	100	--	--	--	--	--	--
10/4/2014	100	--	--	--	--	--	--
10/5/2014	100	--	--	--	--	--	--
10/6/2014	100	--	25	--	--	--	100
10/7/2014	100	--	--	--	--	--	--
10/8/2014	100	--	--	--	100	--	--
10/9/2014	100	--	--	--	--	--	--
10/10/2014	100	--	--	--	--	--	--
10/11/2014	100	--	--	--	--	--	--
10/12/2014	100	--	--	--	--	--	--
10/13/2014	100	--	65	--	--	--	100
10/14/2014	100	--	--	--	--	--	--
10/15/2014	100	--	--	--	100	--	--
10/16/2014	100	--	--	--	--	--	--
10/17/2014	100	--	--	--	--	--	--
10/18/2014	100	--	--	--	--	--	--
10/19/2014	100	--	--	--	--	--	--
10/20/2014	100	--	65	--	--	--	100
10/21/2014	100	--	--	--	--	--	--
10/22/2014	100	--	--	--	100	--	--
10/23/2014	100	--	--	--	--	--	--
10/24/2014	100	--	--	--	--	--	--
10/25/2014	100	--	--	--	--	--	--
10/26/2014	100	--	--	--	--	--	--
10/27/2014	100	--	--	--	--	--	100
10/28/2014	100	--	65	--	--	--	--
10/29/2014	100	--	--	--	100	--	--
10/30/2014	100	--	--	--	--	--	--
10/31/2014	100	--	--	--	--	--	--

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

11/1/2014	100	--	--	--	--	--	--
11/2/2014	100	--	--	--	--	--	--
11/3/2014	100	--	65	--	--	--	100
11/4/2014	100	--	--	--	--	--	--
11/5/2014	100	--	--	--	100	--	--
11/6/2014	100	--	--	--	--	--	--
11/7/2014	100	--	--	--	--	--	--
11/8/2014	100	--	--	--	--	--	--
11/9/2014	100	--	--	--	--	--	--
11/10/2014	100	--	65	--	--	--	100
11/11/2014	100	--	--	--	--	--	--
11/12/2014	100	--	--	--	100	--	--
11/13/2014	100	--	--	--	--	--	--
11/14/2014	100	--	--	--	--	--	--
11/15/2014	100	--	--	--	--	--	--
11/16/2014	100	--	--	--	--	--	--
11/17/2014	100	--	65	--	--	--	100
11/18/2014	100	--	--	--	--	--	--
11/19/2014	100	--	--	--	100	--	--
11/20/2014	100	--	--	--	--	--	--
11/21/2014	100	--	--	--	--	--	--
11/22/2014	100	--	--	--	--	--	--
11/23/2014	100	--	--	--	--	--	--
11/24/2014	100	--	50	--	--	--	100
11/25/2014	100	--	--	--	--	--	--
11/26/2014	100	--	--	--	100	--	--
11/27/2014	100	--	--	--	--	--	--
11/28/2014	100	--	--	--	--	--	--
11/29/2014	100	--	--	--	--	--	--
11/30/2014	90	--	--	--	--	--	--
12/1/2014	100	--	50	--	--	--	100
12/2/2014	100	--	--	--	--	--	--
12/3/2014	100	--	--	--	100	--	--
12/4/2014	100	--	--	--	100	--	--
12/5/2014	100	--	--	--	100	--	--
12/8/2014	100	--	8	50	--	--	100
12/9/2014	100	--	--	--	--	--	--
12/10/2014	100	100	--	--	100	--	--
12/11/2014	100	--	--	--	--	--	--
12/12/2014	100	--	--	--	--	--	--
12/13/2014	100	--	--	--	--	--	--
12/14/2014	100	--	--	--	--	--	--
12/15/2014	100	--	8	--	--	--	100
12/16/2014	100	--	--	--	--	--	--
12/17/2014	100	--	--	--	100	--	--
12/18/2014	100	--	--	--	--	--	--
12/19/2014	100	--	--	--	--	--	--
12/20/2014	100	--	--	--	--	--	--
12/21/2014	100	--	--	--	--	--	--
12/22/2014	100	--	65	--	--	--	100
12/24/2014	100	--	--	--	100	--	--
12/25/2014	100	--	--	--	--	--	--
12/26/2014	100	--	--	--	--	--	--
12/27/2014	100	--	--	--	--	--	--
12/28/2014	100	--	--	--	--	--	--
12/29/2014	100	--	25	--	--	--	100
12/30/2014	100	--	--	--	--	--	--
12/31/2014	100	--	--	--	100	--	--
1/1/2015	100	--	--	--	--	--	--
1/2/2015	100	--	--	--	--	--	--
1/3/2015	100	--	--	--	--	--	--
1/4/2015	100	--	--	--	--	--	--
1/5/2015	100	--	80	--	--	--	100
1/6/2015	100	--	--	--	--	--	--
1/7/2015	100	--	--	--	100	--	--
1/8/2015	100	--	--	--	--	--	--
1/9/2015	100	--	--	--	--	--	--
1/10/2015	100	--	--	--	--	--	--
1/11/2015	100	--	--	--	--	--	--
1/12/2015	100	--	50	--	--	--	100
1/13/2015	100	--	--	--	--	--	--
1/14/2015	100	--	--	--	100	--	--
1/15/2015	100	--	--	--	--	--	--
1/16/2015	100	--	--	--	--	--	--
1/17/2015	100	--	--	--	--	--	--
1/18/2015	100	--	--	--	--	--	--
1/19/2015	100	--	25	--	--	--	100
1/20/2015	100	--	--	--	--	--	--
1/21/2015	100	--	--	--	100	--	--
1/22/2015	100	--	--	--	--	--	--
1/23/2015	100	--	--	--	--	--	--
1/24/2015	100	--	--	--	--	--	--
1/25/2015	100	--	--	--	--	--	--
1/26/2015	100	--	50	--	--	--	100
1/27/2015	100	--	--	--	--	--	--
1/28/2015	100	--	--	--	100	--	--
1/29/2015	100	--	--	--	--	--	--
1/30/2015	100	--	--	--	--	--	--
1/31/2015	100	--	--	--	--	--	--
2/1/2015	100	--	--	--	--	--	--
2/2/2015	100	--	25	--	--	--	100
2/3/2015	100	--	--	--	--	--	--
2/4/2015	100	--	--	--	100	--	--
2/5/2015	100	--	--	--	--	--	--
2/6/2015	100	--	--	--	--	--	--
2/7/2015	100	--	--	--	--	--	--
2/8/2015	100	--	--	--	--	--	--
2/9/2015	100	--	--	--	--	--	--
2/10/2015	100	--	--	--	--	--	--
2/13/2015	100	--	--	--	--	--	--
2/16/2015	100	--	--	--	--	--	--
2/18/2015	100	--	--	--	--	--	--
2/23/2015	100	--	--	--	--	--	--
2/25/2015	100	--	--	--	--	--	--
3/4/2015	100	--	--	--	--	--	--
3/6/2015	100	--	--	--	--	--	--
3/9/2015	100	--	8	--	100	--	100
3/11/2015	100	--	--	--	--	--	--
3/16/2015	100	--	--	--	--	--	--

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

3/18/2015	100	--	--	--	--	--	--
3/25/2015	100	--	--	--	--	--	--
3/27/2015	100	--	--	--	--	--	--
3/30/2015	100	--	--	--	--	--	--
4/3/2015	100	--	--	--	--	--	--
4/8/2015	100	--	--	--	--	--	--
4/10/2015	100	--	--	--	--	--	--
4/13/2015	100	--	25	--	100	--	100
4/15/2015	100	--	--	--	--	--	--
4/20/2015	100	--	--	--	--	--	--
4/22/2015	100	--	--	--	--	--	--
4/27/2015	100	--	--	--	--	--	--
4/29/2015	100	--	--	--	--	--	--
5/4/2015	100	--	--	--	100	--	--
5/6/2015	100	--	--	--	--	--	--
5/11/2015	100	--	--	--	--	--	--
5/13/2015	100	--	--	--	--	--	--
5/18/2015	100	--	65	--	--	--	100
5/20/2015	100	--	--	--	--	--	--
5/29/2015	100	--	--	--	--	--	--
5/30/2015	100	--	--	--	--	--	--
6/1/2015	100	100	8	75	100	100	100
6/3/2015	100	--	--	--	--	--	--
6/8/2015	100	--	--	--	--	--	--
6/10/2015	100	--	--	--	--	--	--
6/16/2015	100	--	--	--	--	--	--
6/17/2015	100	--	--	--	--	--	--
6/22/2015	100	--	--	--	--	--	--
6/24/2015	100	--	--	--	--	--	--
7/10/2015	100	--	--	--	--	--	--
7/11/2015	100	--	--	--	--	--	--
7/13/2015	100	--	65	--	100	--	100
7/15/2015	100	--	--	--	--	--	--
7/20/2015	100	--	--	--	--	--	--
7/22/2015	100	--	--	--	--	--	--
7/30/2015	100	--	--	--	--	--	--
7/31/2015	100	--	--	--	--	--	--
8/3/2015	100	--	--	--	--	--	--
8/5/2015	100	--	--	--	--	--	--
8/10/2015	100	--	65	--	100	--	100
8/12/2015	100	--	--	--	--	--	--
8/17/2015	100	--	--	--	--	--	--
8/19/2015	100	--	--	--	--	--	--
8/24/2015	100	--	--	--	--	--	--
8/26/2015	100	--	--	--	--	--	--
9/1/2015	100	--	65	--	100	--	100
9/3/2015	100	--	--	--	--	--	--
9/7/2015	100	--	--	--	--	--	--
9/18/2015	100	--	--	--	--	--	--
9/19/2015	100	--	--	--	--	--	--
9/21/2015	100	--	--	--	--	--	--
9/23/2015	100	--	--	--	--	--	--
9/28/2015	100	--	--	--	--	--	--
9/30/2015	100	--	--	--	--	--	--
10/5/2015	100	--	50	--	100	--	100
10/7/2015	100	--	--	--	--	--	--
10/12/2015	100	--	--	--	--	--	--
10/14/2015	100	--	--	--	--	--	--
10/22/2015	100	--	--	--	--	--	--
10/23/2015	100	--	--	--	--	--	--
10/26/2015	100	--	--	--	--	--	--
10/28/2015	100	--	--	--	--	--	--
11/2/2015	100	--	65	--	100	--	100
11/4/2015	100	--	--	--	--	--	--
11/9/2015	100	--	--	--	--	--	--
11/11/2015	100	--	--	--	--	--	--
11/16/2015	100	--	--	--	--	--	--
11/18/2015	100	--	--	--	--	--	--
11/23/2015	100	--	--	--	--	--	--
11/24/2015	100	--	--	--	--	--	--
11/30/2015	100	--	--	--	--	--	--
12/5/2015	100	--	--	--	--	--	--
12/6/2015	100	--	--	--	--	--	--
12/7/2015	100	--	8	--	100	--	100
12/9/2015	100	--	--	--	--	--	--
12/11/2015	100	--	--	--	--	--	--
12/14/2015	100	--	--	--	--	--	--
12/16/2015	100	--	--	--	--	--	--
12/21/2015	100	--	--	--	--	--	--
12/22/2015	100	--	--	--	--	--	--
1/1/2016	100	--	--	--	--	--	--
1/7/2016	100	--	--	--	--	--	--
1/8/2016	100	--	--	--	--	--	--
1/11/2016	100	--	25	--	100	--	100
1/13/2016	100	--	--	--	--	--	--
1/19/2016	100	--	--	--	--	--	--
1/20/2016	100	--	--	--	--	--	--
1/25/2016	100	--	--	--	--	--	--
1/27/2016	100	--	--	--	--	--	--
2/1/2016	100	--	--	--	--	--	--
2/5/2016	100	--	--	--	--	--	--
2/8/2016	100	--	8	--	100	--	100
2/10/2016	100	--	--	--	--	--	--
2/15/2016	100	--	--	--	--	--	--
2/17/2016	100	--	--	--	--	--	--
2/22/2016	100	--	--	--	--	--	--
2/24/2016	100	--	--	--	--	--	--
2/29/2016	100	--	--	--	--	--	--
3/8/2016	100	--	--	--	--	--	--
3/9/2016	100	--	--	--	--	--	--
3/14/2016	100	--	65	--	100	--	100
3/16/2016	100	--	--	--	--	--	--
3/21/2016	100	--	--	--	--	--	--
3/23/2016	100	--	--	--	--	--	--
3/30/2016	100	--	--	--	--	--	--
3/31/2016	100	--	--	--	--	--	--
4/4/2016	100	--	25	--	100	--	100
4/6/2016	100	--	--	--	--	--	--

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

4/11/2016	100	--	--	--	--	--	--
4/14/2016	100	--	--	--	--	--	--
4/18/2016	100	--	--	--	--	--	--
4/20/2016	100	--	--	--	--	--	--
4/25/2016	100	--	--	--	--	--	--
4/27/2016	100	--	--	--	--	--	--
5/2/2016	100	--	25	--	100	--	100
5/4/2016	100	--	--	--	--	--	--
5/11/2016	100	--	--	--	--	--	--
5/12/2016	100	--	--	--	--	--	--
5/19/2016	100	--	--	--	--	--	--
5/20/2016	100	--	--	--	--	--	--
5/23/2016	100	--	--	--	--	--	--
5/25/2016	100	--	--	--	--	--	--
6/3/2016	100	--	--	--	--	--	--
6/4/2016	100	--	--	--	--	--	--
6/9/2016	100	--	--	--	--	--	--
6/10/2016	100	100	25	75	100	100	100
6/13/2016	100	--	--	--	--	--	--
6/15/2016	100	--	--	--	--	--	--
6/20/2016	100	--	--	--	--	--	--
6/23/2016	100	--	--	--	--	--	--
6/27/2016	100	--	--	--	--	--	--
6/29/2016	100	--	--	--	--	--	--
7/4/2016	100	--	--	--	--	--	--
7/15/2016	100	--	--	--	--	--	--
7/16/2016	100	--	--	--	--	--	--
7/18/2016	100	--	8	--	100	--	100
7/20/2016	100	--	--	--	--	--	--
7/25/2016	100	--	--	--	--	--	--
7/27/2016	100	--	--	--	--	--	--
8/2/2016	--	--	50	--	--	--	100
8/5/2016	100	--	--	--	--	--	--
8/6/2016	100	--	--	--	100	--	--
8/12/2016	100	--	--	--	--	--	--
8/13/2016	100	--	--	--	--	--	--
8/15/2016	100	--	--	--	--	--	--
8/17/2016	100	--	--	--	--	--	--
8/22/2016	100	--	--	--	--	--	--
8/24/2016	100	--	--	--	--	--	--
9/2/2016	100	--	25	--	--	--	100
9/3/2016	100	--	--	--	--	--	--
9/5/2016	100	--	--	--	100	--	--
9/7/2016	100	--	--	--	--	--	--
9/12/2016	100	--	--	--	--	--	--
9/14/2016	100	--	--	--	--	--	--
9/19/2016	100	--	--	--	--	--	--
9/21/2016	100	--	--	--	--	--	--
9/29/2016	100	--	--	--	--	--	--
9/30/2016	100	--	--	--	--	--	--
10/4/2016	100	--	--	--	--	--	--
10/6/2016	100	--	--	--	--	--	--
10/10/2016	100	--	25	--	100	--	100
10/14/2016	100	--	--	--	--	--	--
10/17/2016	100	--	--	--	--	--	--
10/19/2016	100	--	--	--	--	--	--
10/24/2016	100	--	--	--	--	--	--
10/27/2016	100	--	--	--	--	--	--
10/31/2016	100	--	--	--	--	--	--
11/4/2016	100	--	--	--	--	--	--
11/7/2016	--	--	65	--	--	--	100
11/10/2016	100	--	--	--	--	--	--
11/11/2016	100	--	--	--	100	--	--
11/17/2016	100	--	--	--	--	--	--
11/18/2016	100	--	--	--	--	--	--
11/21/2016	100	--	--	--	--	--	--
11/23/2016	100	--	--	--	--	--	--
12/1/2016	100	--	--	--	--	--	--
12/2/2016	100	--	--	--	--	--	--
12/5/2016	100	--	8	--	100	--	100
12/7/2016	100	--	--	--	--	--	--
12/12/2016	100	--	--	--	--	--	--
12/14/2016	100	--	--	--	--	--	--
12/19/2016	100	--	--	--	--	--	--
12/21/2016	100	--	--	--	--	--	--
12/27/2016	100	--	--	--	--	--	--
12/28/2016	100	--	--	--	--	--	--
1/5/2017	100	--	--	--	--	--	--
1/6/2017	100	--	--	--	--	--	--
1/10/2017	100	--	--	--	--	--	--
1/11/2017	100	--	--	--	--	--	--
1/16/2017	87	--	25	--	100	--	100
1/18/2017	100	--	--	--	--	--	--
1/23/2017	100	--	--	--	--	--	--
1/25/2017	100	--	--	--	--	--	--
1/30/2017	100	--	--	--	--	--	--
2/1/2017	100	--	--	--	--	--	--
2/6/2017	100	--	25	--	100	--	100
2/8/2017	100	--	--	--	--	--	--
2/13/2017	100	--	--	--	--	--	--
2/15/2017	100	--	--	--	--	--	--
2/20/2017	100	--	--	--	--	--	--
2/22/2017	100	--	--	--	--	--	--
3/2/2017	100	--	--	--	--	--	--
3/3/2017	100	--	--	--	--	--	--
3/6/2017	100	--	25	--	100	--	100
3/8/2017	100	--	--	--	--	--	--
3/15/2017	100	--	--	--	--	--	--
3/16/2017	100	--	--	--	--	--	--
3/23/2017	100	--	--	--	--	--	--
3/24/2017	100	--	--	--	--	--	--
3/27/2017	100	--	--	--	--	--	--
3/28/2017	100	--	--	--	--	--	--
4/4/2017	100	--	--	--	--	--	--
4/8/2017	100	--	--	--	--	--	--
4/10/2017	100	--	--	--	100	--	--
4/13/2017	100	--	--	--	--	--	--
4/17/2017	100	--	--	--	--	--	--

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

4/19/2017	100	--	--	--	--	--	--
4/24/2017	100	--	25	--	--	--	100
4/26/2017	100	--	--	--	--	--	--
5/1/2017	100	--	--	--	--	--	--
5/5/2017	100	--	--	--	--	--	--
5/8/2017	100	--	8	--	100	--	--
5/10/2017	100	--	--	--	--	--	100
5/12/2017	37	--	--	--	--	--	--
5/18/2017	100	--	--	--	--	--	--
5/19/2017	100	--	--	--	--	--	--
5/23/2017	100	--	--	--	--	--	--
5/24/2017	100	--	--	--	--	--	--
5/30/2017	100	--	--	--	--	--	--
5/31/2017	100	--	--	--	--	--	--
6/5/2017	100	100	80	100	100	100	100
6/7/2017	100	--	--	--	--	--	--
6/15/2017	100	--	--	--	--	--	--
6/16/2017	100	--	--	--	--	--	--
6/19/2017	100	--	--	--	--	--	--
6/21/2017	100	--	--	--	--	--	--
6/27/2017	100	--	--	--	--	--	--
6/28/2017	100	--	--	--	--	--	--
7/5/2017	100	--	--	--	--	--	--
7/6/2017	100	--	--	--	--	--	--
7/10/2017	100	--	65	--	--	--	100
7/14/2017	100	--	--	--	--	--	--
7/15/2017	100	--	--	--	100	--	--
7/21/2017	100	--	--	--	--	--	--
7/22/2017	100	--	--	--	--	--	--
7/26/2017	100	--	--	--	--	--	--
7/28/2017	100	--	--	--	--	--	--
7/31/2017	100	--	--	--	--	--	--
8/2/2017	100	--	--	--	--	--	--
8/4/2017	100	--	50	--	100	--	100
8/10/2017	100	--	--	--	--	--	--
8/11/2017	100	--	--	--	--	--	--
8/15/2017	100	--	--	--	--	--	--
8/16/2017	100	--	--	--	--	--	--
8/21/2017	100	--	--	--	--	--	--
8/23/2017	100	--	--	--	--	--	--
8/28/2017	100	--	--	--	--	--	--
8/30/2017	100	--	--	--	--	--	--
9/6/2017	100	--	--	--	--	--	--
9/7/2017	100	--	--	--	--	--	--
9/15/2017	100	--	--	--	--	--	--
9/16/2017	100	--	--	--	--	--	--
9/18/2017	100	--	50	--	100	--	100
9/20/2017	100	--	--	--	--	--	--
9/27/2017	100	--	--	--	--	--	--
9/28/2017	100	--	--	--	--	--	--
10/2/2017	100	--	25	--	100	--	100
10/6/2017	100	--	--	--	--	--	--
10/9/2017	100	--	--	--	--	--	--
10/12/2017	100	--	--	--	--	--	--
10/18/2017	100	--	--	--	--	--	--
10/19/2017	100	--	--	--	--	--	--
10/26/2017	100	--	--	--	--	--	--
10/27/2017	100	--	--	--	--	--	--
10/30/2017	100	--	--	--	--	--	--
11/1/2017	100	--	--	--	--	--	--
11/6/2017	--	--	8	--	--	--	100
11/7/2017	100	--	--	--	100	--	--
11/8/2017	100	--	--	--	--	--	--
11/17/2017	100	--	--	--	--	--	--
11/18/2017	100	--	--	--	--	--	--
11/20/2017	100	--	--	--	--	--	--
11/21/2017	100	--	--	--	--	--	--
12/2/2017	100	--	--	--	--	--	--
12/3/2017	100	--	--	--	--	--	--
12/4/2017	100	--	8	--	100	--	100
12/6/2017	100	--	--	--	--	--	--
12/16/2017	100	--	--	--	--	--	--
12/17/2017	100	--	--	--	--	--	--
12/20/2017	100	--	--	--	--	--	--
12/21/2017	100	--	--	--	--	--	--
1/19/2018	100	--	--	--	--	--	--
1/21/2018	100	--	--	--	--	--	--
1/22/2018	--	--	50	--	--	--	100
1/24/2018	100	--	--	--	--	--	--
1/26/2018	100	--	--	--	100	--	--
2/1/2018	100	--	--	--	--	--	--
2/2/2018	100	--	--	--	--	--	--
2/5/2018	100	--	8	--	100	--	100
2/7/2018	100	--	--	--	--	--	--
2/12/2018	100	--	--	--	--	--	--
2/13/2018	100	--	--	--	--	--	--
2/24/2018	100	--	--	--	--	--	--
2/25/2018	100	--	--	--	--	--	--
3/2/2018	100	--	--	--	--	--	--
3/3/2018	100	--	--	--	--	--	--
3/5/2018	100	--	8	--	100	--	100
3/7/2018	100	--	--	--	--	--	--
3/12/2018	100	--	--	--	--	--	--
3/14/2018	100	--	--	--	--	--	--
3/21/2018	100	--	--	--	--	--	--
3/23/2018	100	--	--	--	--	--	--
3/26/2018	100	--	--	--	--	--	--
3/28/2018	100	--	--	--	--	--	--
4/2/2018	100	--	8	--	100	--	100
4/4/2018	100	--	--	--	--	--	--
4/9/2018	100	--	--	--	--	--	--
4/11/2018	100	--	--	--	--	--	--
4/19/2018	100	--	--	--	--	--	--
4/20/2018	100	--	--	--	--	--	--
4/28/2018	100	--	--	--	--	--	--
4/29/2018	100	--	--	--	--	--	--
5/2/2018	100	--	--	--	--	--	--
5/7/2018	100	--	--	--	--	--	--

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

5/9/2018	100	--	--	--	--	--	--
5/14/2018	81	--	8	--	100	--	100
5/16/2018	100	--	--	--	--	--	--
5/24/2018	100	--	--	--	--	--	--
5/25/2018	100	--	--	--	--	--	--
5/31/2018	100	--	--	--	--	--	--
6/1/2018	100	--	--	--	--	--	--
6/4/2018	35	16	8	8	100	--	100
6/8/2018	100	--	--	--	--	--	--
6/14/2018	100	--	--	--	--	--	--
6/15/2018	100	--	--	--	--	--	--
6/22/2018	100	--	--	--	--	--	--
6/23/2018	100	--	--	--	--	--	--
6/26/2018	100	--	--	--	--	--	--
6/27/2018	100	--	--	--	--	--	--
7/11/2018	100	--	--	--	--	--	--
7/12/2018	100	--	--	--	--	--	--
7/16/2018	--	--	25	--	--	--	6
7/19/2018	100	--	--	--	--	--	--
7/20/2018	100	--	--	--	100	--	--
7/26/2018	100	--	--	--	--	--	--
7/27/2018	100	--	--	--	--	--	--
8/1/2018	100	--	--	--	--	--	--
8/2/2018	100	--	--	--	--	--	--
8/8/2018	100	--	--	--	--	--	--
8/9/2018	100	--	--	--	--	--	--
8/13/2018	--	--	25	--	--	--	100
8/16/2018	100	--	--	--	--	--	--
8/17/2018	100	--	--	--	100	--	--
8/24/2018	100	--	--	--	--	--	--
8/25/2018	100	--	--	--	--	--	--
9/1/2018	100	--	--	--	--	--	--
9/3/2018	100	--	--	--	--	--	--
9/4/2018	100	--	--	--	--	--	--
9/15/2018	100	--	--	--	--	--	--
9/16/2018	100	--	--	--	--	--	--
9/17/2018	--	--	65	--	--	--	100
9/19/2018	100	--	--	--	100	--	--
9/21/2018	100	--	--	--	--	--	--
9/26/2018	100	--	--	--	--	--	--
9/27/2018	100	--	--	--	--	--	--
10/1/2018	--	--	25	--	--	--	100
10/3/2018	100	--	--	--	100	--	--
10/5/2018	100	--	--	--	--	--	--
10/10/2018	100	--	--	--	--	--	--
10/13/2018	100	--	--	--	--	--	--
10/19/2018	100	--	--	--	--	--	--
10/20/2018	100	--	--	--	--	--	--
10/27/2018	100	--	--	--	--	--	--
10/28/2018	100	--	--	--	--	--	--
11/2/2018	100	--	--	--	--	--	--
11/3/2018	100	--	--	--	--	--	--
11/5/2018	--	--	8	--	--	--	100
11/8/2018	100	--	--	--	--	--	--
11/9/2018	100	--	--	--	100	--	--
11/27/2018	100	--	--	--	--	--	--
11/28/2018	100	--	--	--	--	--	--
12/7/2018	100	--	--	--	--	--	--
12/8/2018	100	--	--	--	--	--	--
12/10/2018	--	--	50	--	--	--	100
12/15/2018	100	--	--	--	--	--	--
12/16/2018	100	--	--	--	--	--	--
12/17/2018	100	--	6	--	100	--	50
12/19/2018	100	--	--	--	--	--	--
12/25/2018	100	--	--	--	--	--	--
12/26/2018	100	--	--	--	--	--	--
1/2/2019	100	--	--	--	--	--	--
1/3/2019	100	--	--	--	--	--	--
1/10/2019	100	--	--	--	--	--	--
1/11/2019	100	--	--	--	--	--	--
1/17/2019	100	--	--	--	--	--	--
1/18/2019	100	--	--	--	--	--	--
1/21/2019	--	--	65	--	--	--	100
1/24/2019	100	--	--	--	--	--	--
1/26/2019	100	--	--	--	100	--	--
1/31/2019	100	--	--	--	--	--	--
2/1/2019	100	--	--	--	--	--	--
2/4/2019	--	--	25	--	--	--	100
2/7/2019	100	--	--	--	--	--	--
2/8/2019	100	--	--	--	100	--	--
2/13/2019	100	--	--	--	--	--	--
2/14/2019	100	--	--	--	--	--	--
2/20/2019	100	--	--	--	--	--	--
2/21/2019	100	--	--	--	--	--	--
2/27/2019	100	--	--	--	--	--	--
2/28/2019	100	--	--	--	--	--	--
3/4/2019	100	--	8	--	100	--	100
3/6/2019	100	--	--	--	--	--	--
3/14/2019	100	--	--	--	--	--	--
3/15/2019	100	--	--	--	--	--	--
3/20/2019	100	--	--	--	--	--	--
3/21/2019	100	--	--	--	--	--	--
3/25/2019	100	--	--	--	--	--	--
3/27/2019	100	--	--	--	--	--	--
4/5/2019	100	--	--	--	--	--	--
4/6/2019	100	--	--	--	--	--	--
4/8/2019	100	--	65	--	100	--	100
4/10/2019	100	--	--	--	--	--	--
4/15/2019	100	--	--	--	--	--	--
4/17/2019	100	--	--	--	--	--	--
4/22/2019	100	--	--	--	--	--	--
4/24/2019	100	--	--	--	--	--	--

Results Analysis							
Number of Tests	734	9	95	9	108	7	92
Number of Tests (04/2017 - 04/2019)	205	2	26	2	25	1	26
Number of Violations ¹	13	1	4	0	0	0	2

Historical Data (2015-2019) - WET Testing Results

King America Finishing, Inc.
GA0003280

Number of Violations ¹ (2016 - Current)	3	1	1	0	0	0	2
Frequency of Violations	1.77%	11.11%	4.21%	0.00%	0.00%	0.00%	2.17%
Frequency of Violations (2016 - Current)	1.46%	50.00%	3.85%	0.00%	0.00%	0.00%	7.69%

¹ In-stream WET tests do not have limits; thus the data entered under the number of violations rows for in-stream data represents instances where some amount of toxicity was indicated in the receiving water, not permit violations.

Violation

Appendix F – Production-Based Effluent Limitations

Effluent Calculations from 40 CFR 410; Subpart D

King America Finishing, Inc.
GA0003280

Permit Limits = Average Production (lbs/day) x Mass Factor (lbs/1000 lbs)

Tier 1 - Average Production (Plant 1) ≤ 97,939 lbs/day

Parameter	Source	Average Production (lbs/day)	BPT Mass Factors (lbs/ 1000 lbs)		NPDES Permit Limits (lbs/day)	
			Daily Average	Daily Maximum	Daily Average	Daily Maximum
BOD ₅	Plant 1	97,939	3.3	6.6	323	646
COD	Plant 1 - (a) ¹	97,939	30.0	60.0	2,938	5,876
	Plant 1 - (b) ¹ - Natural Fiber	27,423	10.0	20.0	274	548
	Plant 1 - (d) ¹ - Complex Blend	70,516	30.0	60.0	2,115	4,231
	Total				5,328	10,656
TSS	Plant 1	97,939	8.9	17.8	872	1,743
Sulfide	Plant 1	97,939	0.10	0.20	9.8	19.6
Total Phenols	Plant 1	97,939	0.05	0.10	4.9	9.8
Total Chromium	Plant 1	97,939	0.05	0.10	4.9	9.8

Tier 2 - 97,939 lbs/day < Average Production (Plant 1) ≤ 111,849 lbs/day

Parameter	Source	Average Production (lbs/day)	BPT Mass Factors (lbs/ 1000 lbs)		NPDES Permit Limits (lbs/day)	
			Daily Average	Daily Maximum	Daily Average	Daily Maximum
BOD ₅	Plant 1	111,849	3.3	6.6	369	738
COD	Plant 1 - (a) ¹	111,849	30.0	60.0	3,355	6,711
	Plant 1 - (b) ¹ - Natural Fiber	31,318	10.0	20.0	313	626
	Plant 1 - (d) ¹ - Complex Blend	80,531	30.0	60.0	2,416	4,832
	Total				6,085	12,169
TSS	Plant 1	111,849	8.9	17.8	995	1,991
Sulfide	Plant 1	111,849	0.10	0.20	11.2	22.4
Total Phenols	Plant 1	111,849	0.05	0.10	5.6	11.2
Total Chromium	Plant 1	111,849	0.05	0.10	5.6	11.2

Tier 3 - 111,849 lbs/day < Average Production (Plant 1) ≤ 128,116 lbs/day

Parameter	Source	Average Production (lbs/day)	BPT Mass Factors (lbs/ 1000 lbs)		NPDES Permit Limits (lbs/day)	
			Daily Average	Daily Maximum	Daily Average	Daily Maximum
BOD ₅	Plant 1	128,116	3.3	6.6	423	846
COD	Plant 1 - (a) ¹	128,116	30.0	60.0	3,843	7,687
	Plant 1 - (b) ¹ - Natural Fiber	35,872	10.0	20.0	359	717
	Plant 1 - (d) ¹ - Complex Blend	92,244	30.0	60.0	2,767	5,535
	Total				6,970	13,939
TSS	Plant 1	128,116	8.9	17.8	1,140	2,280
Sulfide	Plant 1	128,116	0.10	0.20	12.8	25.6
Total Phenols	Plant 1	128,116	0.05	0.10	6.4	12.8
Total Chromium	Plant 1	128,116	0.05	0.10	6.4	12.8

¹ (a),(b),(c), & (d) refer to the BPT limitations established in the subsections of 40 CFR 410.42

Appendix G – Historical DMR Data

Historical Data (2015-2019) - Daily Average DMR Values

King America Finishing, Inc.
GA0003280

Date	Parameters											
	BOD ₅ (lbs/day)	BOD ₅ (mg/L)	COD (lbs/day)	TSS (lbs/day)	TSS (mg/L)	Sulfide (lbs/day)	Sulfide (mg/L)	Total Ammonia (lbs/day)	Total Ammonia (mg/L)	Total Phenols (lbs/day)	Total Chromium (lbs/day)	Total Chromium (mg/L)
	Monthly Average											
1/1/2015	181	14	3052	162	12	13.43	1.00	23.41	1.76	0.6	0.12	0.01
2/1/2015	182	14	2893	208	15	12.81	1.00	33.08	2.39	0.9	0.15	0.01
3/1/2015	170	13	2502	203	16	14.20	1.18	26.00	1.98	0.6	0.11	0.01
4/1/2015	263	18	3551	329	22	14.29	1.13	17.73	1.17	0.7	0.15	0.01
5/1/2015	209	13	3414	213	13	19.55	1.43	20.59	1.30	0.8	0.15	0.01
6/1/2015	112	9	2623	121	9	2.39	0.20	15.91	1.26	0.6	0.12	0.01
7/1/2015	109	9	2530	80	7	2.06	0.20	7.70	0.66	0.6	0.14	0.01
8/1/2015	89	6	2679	74	5	2.89	0.20	11.86	0.82	0.6	0.13	0.01
9/1/2015	60	4	2468	46	3	2.80	0.20	10.39	0.75	0.8	0.16	0.01
10/1/2015	151	10	2860	230	16	2.81	0.20	11.53	0.82	0.7	0.15	0.01
11/1/2015	138	9	2399	68	5	2.77	0.20	16.36	1.19	1.0	0.15	0.01
12/1/2015	127	10	2564	76	6	2.64	0.20	15.00	1.14	0.7	0.12	0.01
1/1/2016	155	12	2398	142	11	2.56	0.20	17.07	1.29	0.6	0.12	0.01
2/1/2016	177	15	2415	193	16	2.44	0.20	12.81	1.05	0.6	0.11	0.01
3/1/2016	141	10	2401	137	9	2.77	0.20	16.99	1.23	1.1	0.15	0.01
4/1/2016	94	8	2143	64	6	2.31	0.20	11.31	1.02	0.9	0.11	0.01
5/1/2016	41	3	1832	31	3	2.41	0.20	8.15	0.66	0.8	0.13	0.01
6/1/2016	38	3	1663	40	3	2.64	0.20	8.89	0.69	0.7	0.13	0.01
7/1/2016	51	4	2060	59	4	2.50	0.20	10.58	0.82	0.7	0.13	0.01
8/1/2016	62	4	2354	73	5	2.83	0.20	15.16	1.08	0.8	0.16	0.01
9/1/2016	47	3	2764	49	4	2.69	0.20	13.45	0.99	0.6	0.13	0.01
10/1/2016	47	4	2474	40	3	2.55	0.20	16.33	1.27	0.6	0.13	0.01
11/1/2016	80	6	2760	94	7	2.42	0.20	21.95	1.79	0.6	0.13	0.01
12/1/2016	39	3	2649	36	3	2.55	0.20	18.04	1.33	0.8	0.12	0.01
1/1/2017	56	4	2071	46	4	2.44	0.20	13.61	1.11	0.7	0.13	0.01
2/1/2017	78	6	2271	38	3	2.60	0.20	13.38	1.05	0.7	0.14	0.01
3/1/2017	98	7	2969	59	4	2.88	0.20	14.91	1.03	0.5	0.14	0.01
4/1/2017	84	5	2941	65	4	3.13	0.20	17.66	1.12	0.8	0.16	0.01
5/1/2017	122	8	2813	83	5	3.10	0.20	12.15	0.79	0.9	0.17	0.01
6/1/2017	72	4	3054	62	4	3.50	0.20	12.09	0.69	0.9	0.18	0.01
7/1/2017	55	3	3192	53	3	3.10	0.20	15.33	1.04	0.1	0.15	0.01
8/1/2017	55	3	3629	57	3	3.42	0.20	17.32	1.02	0.2	0.19	0.01
9/1/2017	55	4	3447	42	3	2.66	0.20	27.60	2.06	0.2	0.13	0.01
10/1/2017	88	6	3535	105	7	2.84	0.20	43.61	3.05	0.1	0.15	0.01
11/1/2017	85	7	3398	55	5	2.57	0.20	29.76	2.16	0.1	0.12	0.01
12/1/2017	95	6	4405	97	6	3.03	0.20	23.56	1.54	0.2	0.17	0.01
1/1/2018	140	10	4094	140	10	4.10	0.28	45.96	3.38	0.1	0.12	0.01
2/1/2018	172	11	4171	196	12	3.25	0.20	10.94	0.67	0.3	0.17	0.01
3/1/2018	166	11	4220	152	10	2.98	0.20	11.64	0.81	0.1	0.15	0.01
4/1/2018	202	13	4062	135	9	3.18	0.20	23.73	1.41	0.2	0.16	0.01
5/1/2018	67	4	3529	96	6	3.04	0.20	93.40	5.73	0.2	0.16	0.01
6/1/2018	86	5	3976	140	8	3.21	0.20	13.99	0.90	0.3	0.16	0.01
7/1/2018	66	4	3384	66	4	3.56	0.20	24.08	1.44	0.4	0.18	0.01
8/1/2018	56	3	3456	82	5	3.59	0.20	13.41	0.72	0.2	0.18	0.01
9/1/2018	37	2	2795	47	3	3.06	0.20	14.77	0.97	0.1	0.14	0.01
10/1/2018	95	6	3261	113	7	3.31	0.20	10.84	0.67	0.2	0.15	0.01
11/1/2018	229	13	4839	201	12	3.21	0.20	64.06	3.77	0.2	0.17	0.01
12/1/2018	88	5	2639	92	5	3.93	0.24	17.70	1.25	0.2	0.166	0.01
1/1/2019	76	5	2408	77	5	2.99	0.20	21.59	1.45	0.1	0.138	0.01
2/1/2019	50	3	2968	42	3	3.26	0.20	9.85	0.64	0.2	0.161	0.01
3/1/2019	53	3	2749	43	3	3.15	0.20	11.92	0.75	0.2	0.154	0.01
4/1/2019	39	3	2297	35	3	2.80	0.20	10.69	0.76	0.2	0.146	0.01

Long Term Average	102	7	2962	100	7	4.06	0.29	19.61	1.35	0.5	0.14	0.01
# of Violations (Current)	0	0	0	0	0	0	0	0	0	0	0	0
# of Violations (Proposed)	2	0	7	0	--	5	0	0	0	0	0	--

Historical Data (2015-2019) - Daily Maximum DMR Values

King America Finishing, Inc.
GA0003280

Date	Parameters												
	BOD ₅ (lbs/day)	BOD ₅ (mg/L)	COD (lbs/day)	TSS (lbs/day)	TSS (mg/L)	Sulfide (lbs/day)	Sulfide (mg/L)	Total Ammonia (lbs/day)	Total Ammonia (mg/L)	Total Phenols (lbs/day)	Total Chromium (lbs/day)	Total Chromium (mg/L)	Temperature (°F)
	Daily Maximum												
1/1/2015	379	25	4611	292	20	21.93	1.00	66.41	4.74	0.7	0.14	0.01	69
2/1/2015	394	23	4830	468	32	17.85	1.00	93.99	6.83	1.4	0.18	0.01	72
3/1/2015	424	27	3689	422	31	36.23	2.40	91.54	7.73	0.6	0.12	0.01	78
4/1/2015	507	34	4498	891	59	24.29	2.00	43.90	2.83	0.9	0.17	0.01	81
5/1/2015	422	22	5755	665	35	74.86	4.80	31.69	1.66	0.9	0.17	0.01	87
6/1/2015	279	17	4184	296	19	3.42	0.20	82.24	6.05	0.7	0.14	0.01	90
7/1/2015	215	16	3377	199	15	3.17	0.20	15.24	1.07	0.8	0.16	0.01	90
8/1/2015	228	14	4091	266	16	3.60	0.20	27.48	1.69	0.7	0.14	0.01	90
9/1/2015	119	8	3448	100	7	3.39	0.20	26.38	1.71	0.8	0.17	0.01	90
10/1/2015	453	30	4029	684	45	3.70	0.20	19.61	1.51	0.9	0.17	0.01	84
11/1/2015	297	17	3101	147	11	3.77	0.20	34.41	2.18	1.1	0.17	0.01	84
12/1/2015	255	18	3541	185	14	3.19	0.20	23.67	1.65	0.7	0.14	0.01	81
1/1/2016	317	22	3441	352	11	3.55	0.20	39.33	2.37	0.7	0.14	0.01	78
2/1/2016	296	24	3485	390	16	3.50	0.20	29.35	2.41	0.7	0.12	0.01	75.74
3/1/2016	580	33		753	9	3.49	0.20	30.68	1.91	2.1	0.17	0.01	82.76
4/1/2016	250	22	3286	196	6	3.30	0.20	24.04	2.03	1.7	0.12	0.01	81
5/1/2016	78	6	2158	37	3	2.97	0.20	18.26	1.50	1.0	0.14	0.01	84
6/1/2016	73	5	2757	87	3	3.40	0.20	16.39	1.13	0.8	0.16	0.01	93
7/1/2016	128	10	2638	174	4	3.65	0.20	23.20	1.55	0.7	0.13	0.01	93
8/1/2016	258	22	3536	350	5	3.74	0.20	29.82	2.40	0.9	0.19	0.01	90
9/1/2016	108	8	4845	135	4	4.25	0.20	31.05	1.65	0.7	0.14	0.01	87.08
10/1/2016	91	7	3518	70	3	3.25	0.20	33.75	2.26	0.7	0.14	0.01	82.04
11/1/2016	225	15	3972	370	7	3.47	0.20	48.87	3.64	0.8	0.16	0.01	81
12/1/2016	78	5	4120	80	3	3.39	0.20	69.56	4.17	1.2	0.17	0.01	78
1/1/2017	143	10	2984	111	8	3.24	0.20	35.78	3.17	0.7	0.15	0.01	78
2/1/2017	165	11	2945	79	5	3.37	0.20	54.90	4.54	0.8	0.17	0.01	78
3/1/2017	224	14	4340	139	8	3.49	0.20	39.67	2.39	0.8	0.17	0.01	81
4/1/2017	202	12	4375	172	12	4.35	0.20	84.34	5.24	0.9	0.18	0.01	83.6
5/1/2017	439	23	5484	238	16	3.90	0.20	26.53	1.42	1.0	0.2	0.01	84.74
6/1/2017	186	11	4278	173	10	4.42	0.20	17.95	1.21	0.9	0.19	0.01	87.3
7/1/2017	191	11	4533	238	14	4.60	0.20	25.55	2.19	0.2	0.17	0.01	94.46
8/1/2017	86	5	6096	228	12	4.05	0.20	34.80	1.83	0.3	0.2	0.01	90.9
9/1/2017	155	10	4624	98	7	3.50	0.20	40.91	2.91	0.3	0.15	0.01	85.9
10/1/2017	321	21	5127	470	30	3.67	0.20	203.71	11.80	0.2	0.17	0.01	86.4
11/1/2017	194	13	4493	146	17	3.32	0.20	98.12	6.84	0.2	0.17	0.01	78.9
12/1/2017	220	14	5465	299	20	4.09	0.20	62.34	4.13	0.2	0.2	0.01	75.2
1/1/2018	223	14	5076	288	10	16.15	0.28	111.81	10.90	0.1	0.14	0.01	77.8
2/1/2018	405	27	5130	501	12	3.72	0.20	26.56	1.75	0.3	0.19	0.01	79.8
3/1/2018	269	16	5689	273	10	3.52	0.20	18.77	1.36	0.1	0.17	0.01	79.1
4/1/2018	352	21	5015	274	9	3.85	0.20	221.32	11.90	0.2	0.18	0.01	78.08
5/1/2018	141	8	5524	331	6	3.97	0.20	1312.05	76.00	0.2	0.19	0.01	85.6
6/1/2018	184	11	5474	430	8	3.85	0.20	25.14	1.91	0.3	0.19	0.01	88.60
7/1/2018	166	8	4415	152	4	4.44	0.20	98.91	5.93	0.4	0.19	0.01	89.90
8/1/2018	181	8	4475	238	5	4.64	0.20	38.26	1.65	0.2	0.20	0.01	88.60
9/1/2018	83	5	3833	163	3	3.84	0.20	73.85	4.71	0.1	0.17	0.01	88.10
10/1/2018	343	20	4307	366	7	3.97	0.20	25.92	1.85	0.2	0.18	0.01	88.6
11/1/2018	685	39	9626	539	31	3.79	0.20	301.91	18.10	0.2	0.173	0.01	79.9
12/1/2018	165	9	6446	345	18	13.50	0.71	171.30	15.80	0.2	0.19	0.01	76.8
1/1/2019	350	22	3452	205	13	4.21	0.26	222.25	14.10	0.2	0.162	0.01	72.9
2/1/2019	77	5	3582	65	4	3.94	0.20	53.21	4.17	0.2	0.176	0.01	78.6
3/1/2019	93	6	3336	67	5	3.75	0.20	33.26	2.11	0.3	0.175	0.01	77.1
4/1/2019	56	5	3146	50	3	3.32	0.20	28.31	2.07	0.3	0.156	0.01	82.1

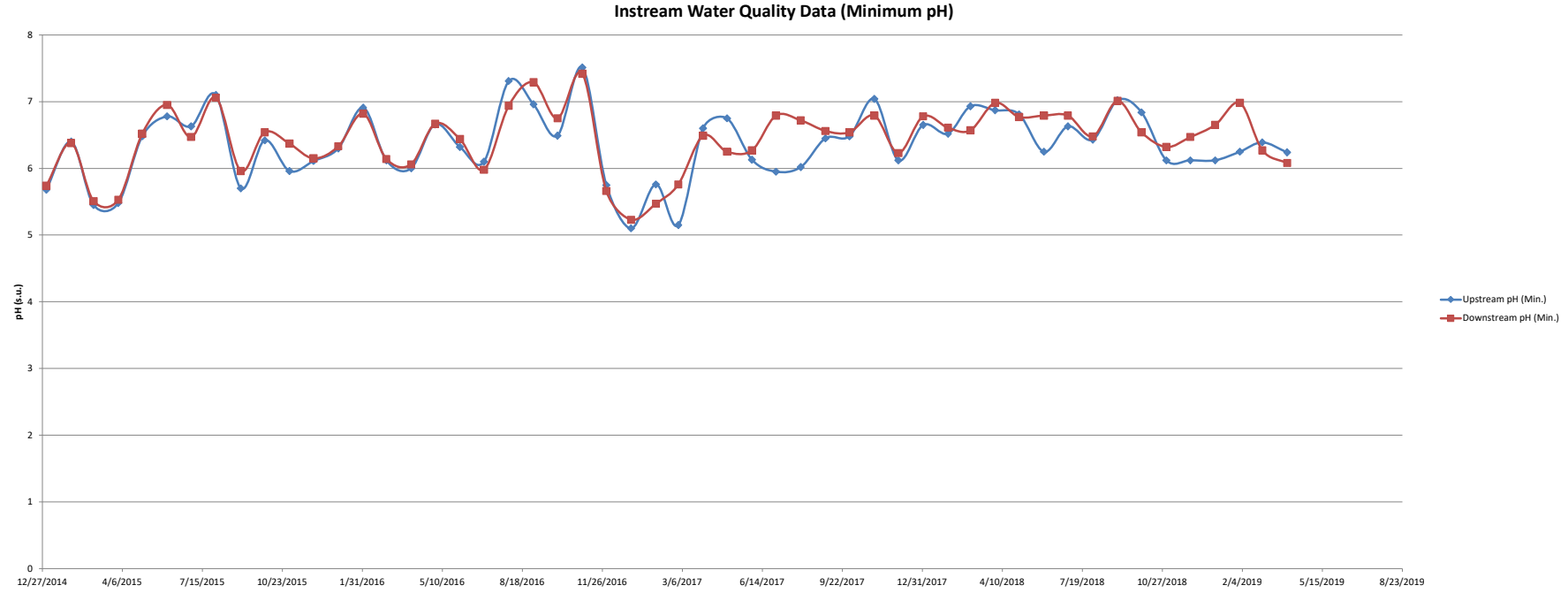
# of Violations (Current)	0	0	0	0	0	1	1	1	4	0	0	0
# of Violations (Proposed)	4	0	1	0	0	6	1	1	4	0	0	--

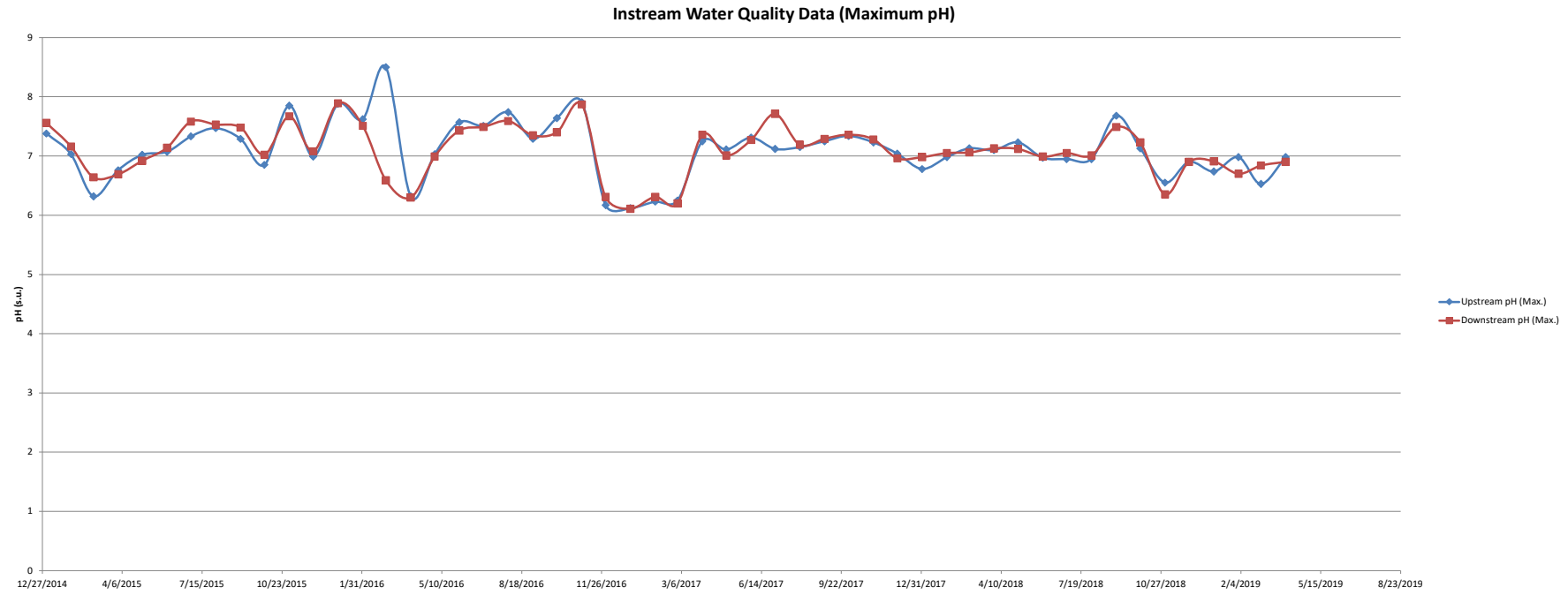
Appendix H – Historical Instream Data

Historical Data (2015-2019) - Instream Sampling Results

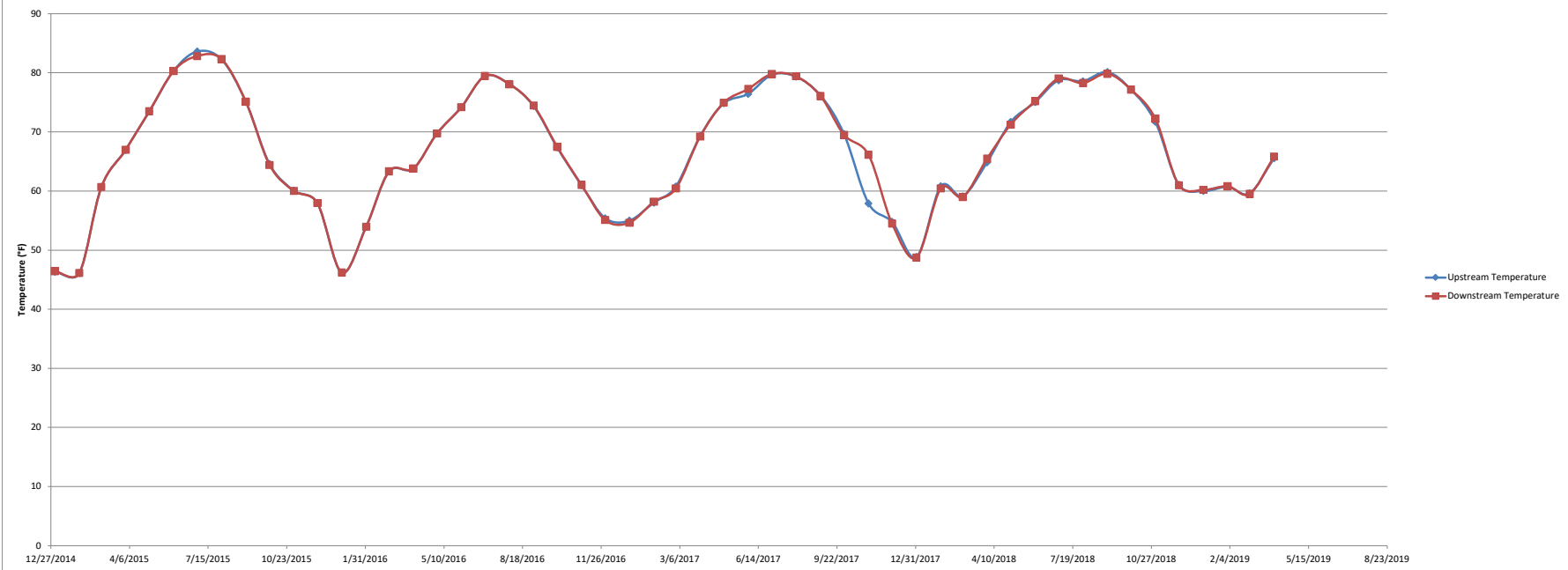
King America Finishing, Inc.
GA0003280

Date	Parameters																					
	pH (s.u.) Min.		pH (s.u.) Max.		Temperature (°F)		Conductivity (µmho/cm)		Total Ammonia (mg/L)		Formaldehyde (mg/L)		Sodium (mg/L)		Sulfide (mg/L)		Peroxide (mg/L)		Dissolved Oxygen (mg/L)		Color (ADMI)	
	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream
1/1/2015	5.68	5.74	7.38	7.56	46.35	46.44	52	57	0.20	0.20	0.05	0.05	5	5	1	1	0.1	0.1	9.64	10.02	86	87
2/1/2015	6.4	6.38	7.03	7.16	46.12	46.14	54	60	0.20	0.20	0.05	0.05	5	5	1	1	--	--	9.44	10.03	65	68
3/1/2015	5.45	5.51	6.32	6.64	60.68	60.67	55	56	0.20	0.20	0.05	0.05	5	5	1	1	--	--	6.07	6.41	114	112
4/1/2015	5.48	5.53	6.76	6.69	66.96	66.97	68	70	0.20	0.20	0.05	0.05	5	5	1	1	--	--	6.03	6.23	152	150
5/1/2015	6.48	6.52	7.02	6.92	73.46	73.5	95	170	0.20	0.20	0.05	0.05	5	5	1	1	--	--	6.14	6.26	100	99
6/1/2015	6.78	6.95	7.07	7.14	80.31	80.29	117	200	0.20	0.20	0.05	0.05	3.37	29.3	0.2	0.2	--	--	6.65	6.69	66	70
7/1/2015	6.63	6.47	7.33	7.58	83.61	82.82	122	1078	0.20	0.20	0.05	0.05	5	5	0.2	0.2	--	--	6.01	6.16	58	55
8/1/2015	7.1	7.06	7.47	7.53	82.27	82.31	140	311	0.20	0.25	0.05	0.07	5	24.3	0.2	0.2	--	--	5.92	5.66	37	42
9/1/2015	5.7	5.96	7.29	7.48	75.11	75.11	96	185	0.20	0.20	0.05	0.08	5	29.3	0.2	0.2	--	--	5.45	5.62	65	69
10/1/2015	6.42	6.54	6.85	7.02	64.58	64.41	231	118	0.20	0.20	0.05	0.05	5	11	0.2	0.2	--	--	5.98	6.16	91	94
11/1/2015	5.96	6.37	7.85	7.67	60.06	60.01	72	66	0.20	0.20	0.05	0.05	5	6.17	0.2	0.2	--	--	4.96	4.99	138	153
12/1/2015	6.11	6.15	6.99	7.08	57.97	57.96	74	69	0.20	0.20	0.05	0.05	5	5	0.2	0.2	--	--	4.84	4.78	117	127
1/1/2016	6.3	6.33	7.88	7.89	46.17	46.22	136	47	0.20	0.20	0.05	0.05	90.6	5	0.2	0.2	--	--	8.09	7.98	145	143
2/1/2016	6.91	6.82	7.62	7.51	53.96	53.96	49	50	0.20	1.30	0.05	0.05	5	5	0.2	0.2	--	--	7.05	7.21	112	114
3/1/2016	6.12	6.14	8.5	6.59	63.3	63.33	70	77	0.20	0.20	0.05	0.05	5	5	0.2	0.2	--	--	6.14	6.15	125	120
4/1/2016	6	6.06	6.32	6.3	63.78	63.8	65	65	0.20	0.20	0.05	0.05	5	5	0.2	0.2	--	--	6.05	6.07	113	125
5/1/2016	6.66	6.667	7.03	6.99	69.73	69.74	97	103	0.20	0.20	0.05	0.05	5	5	0.2	0.2	--	--	6.33	6.3	72	73
6/1/2016	6.32	6.44	7.57	7.43	74.16	74.16	108	134	0.20	0.20	0.05	0.05	5	5	0.2	0.2	--	--	3.95	4.85	105	103
7/1/2016	6.1	5.98	7.51	7.49	79.43	79.45	125	209	0.20	0.20	0.05	0.05	5	37.2	0.2	0.2	--	--	4.74	5.19	59	60
8/1/2016	7.31	6.94	7.74	7.59	78.13	78.08	164	423	0.20	0.20	0.05	0.06	5	7.61	0.2	0.2	0	0	4.41	5.49	34	35
9/1/2016	6.96	7.29	7.29	7.35	74.37	74.46	118	331	0.23	0.20	0.05	0.05	5	9.28	0.2	0.2	0	0	5.96	5.85	78	80
10/1/2016	6.49	6.75	7.64	7.4	67.37	67.47	127	236	0.20	0.20	0.05	0.12	6.3	58.3	0.2	0.2	0	0	6.19	6.03	72	72
11/1/2016	7.51	7.42	7.91	7.87	61	61.04	113	156	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	2.83	3.06	40	44
12/1/2016	5.75	5.66	6.17	6.31	55.39	55.09	81	69	0.20	0.20	0.05	0.05	5	7.12	0.2	0.2	0	0	6.25	6.14	73	76
1/1/2017	5.1	5.23	6.12	6.11	55	54.64	69	73	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	6.13	6.45	108	104
2/1/2017	5.76	5.47	6.23	6.31	58.02	58.21	80	76	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	6.5	6.45	109	106
3/1/2017	5.15	5.76	6.25	6.2	60.76	60.44	86	96	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	6.73	6.78	117	115
4/1/2017	6.6	6.49	7.25	7.36	69.31	69.22	309	102	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.12	5.92	91	91
5/1/2017	6.75	6.25	7.11	7.01	74.84	74.95	221	268	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.11	6.01	68	75
6/1/2017	6.13	6.27	7.31	7.27	76.42	77.27	78	85	0.20	0.20	0.10	0.14	5	5	0.2	0.2	0	0	5.23	6.8	66	67
7/1/2017	5.95	6.79	7.12	7.71	79.66	79.79	88	110	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.75	5.64	57	60
8/1/2017	6.02	6.72	7.15	7.19	79.34	79.41	89	94	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	4.14	4.12	94	92
9/1/2017	6.45	6.56	7.25	7.29	76.15	76.06	101	105	0.20	0.20	0.05	0.05	5	11.3	0.2	0.2	0	0	4.67	4.43	85	79
10/1/2017	6.48	6.54	7.34	7.36	69.62	69.49	169	133	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	6	6.16	65	62
11/1/2017	7.04	6.79	7.23	7.28	57.88	66.16	68	66	0.20	0.20	0.05	0.05	5	10.1	0.2	0.2	0	0	7.43	7.23	54	57
12/1/2017	6.12	6.23	7.04	6.96	54.77	54.5	104	99	0.20	0.20	0.05	0.05	10.1	10.1	0.2	0.2	0	0	8.82	8.59	62	63
1/1/2018	6.65	6.78	6.78	6.98	48.84	48.73	92	81	0.20	0.63	0.05	0.05	5	5	0.2	0.9	0	0	7.08	7.39	60	60
2/1/2018	6.52	6.61	6.98	7.05	60.8	60.44	81	95	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.51	5.45	84	84
3/1/2018	6.93	6.57	7.13	7.06	59.09	59	102	96	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.88	5.99	85	85
4/1/2018	6.87	6.98	7.1	7.13	64.85	65.48	96	98	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.38	5.49	99	98
5/1/2018	6.81	6.77	7.23	7.12	71.67	71.24	108	109	2.00	0.32	0.08	0.06	5	5	0.2	0.2	0	0	4.25	4.38	101	103
6/1/2018	6.25	6.79	6.97	6.99	75.02	75.2	106	97	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	3.75	4.86	113	117
7/1/2018	6.63	6.79	6.95	7.05	78.74	79.04	102	106	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.21	5.16	80	81
8/1/2018	6.43	6.48	6.95	7.01	78.58	78.26	87	68	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.1	5.05	104	96
9/1/2018	7.02	7.01	7.68	7.49	80.11	79.84	99	66	0.20	0.20	0.05	0.09	3.87	34.8	0.2	0.2	0	0	5.14	5.36	34	33
10/1/2018	6.84	6.54	7.13	7.23	77.18	77.18	248	97	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	6.21	6.26	49	48
11/1/2018	6.12	6.32	6.55	6.35	71.69	72.23	70	135	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.16	5.88	84	84
12/1/2018	6.12	6.47	6.9	6.9	61.04	60.98	83	93	0.20	0.20	0.05	0.05	5	5.39	0.2	0.2	0	0	5.11	5.23	84	73
1/1/2019	6.12	6.65	6.74	6.91	60.01	60.19	77	65	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	7	7.1	90	87
2/1/2019	6.25	6.98	6.98	6.7	60.71	60.8	78	118	0.20	0.22	0.05	0.05	5	5.29	0.2	0.2	0	0	7.64	7.25	79	80
3/1/2019	6.39	6.27	6.53	6.84	59.63	59.5	84	104	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	6.96	6.84	84	81
4/1/2019	6.24	6.08	6.98	6.9	65.57	65.84	92	114	0.20	0.20	0.05	0.05	5	5	0.2	0.2	0	0	5.15	5.98	76	76

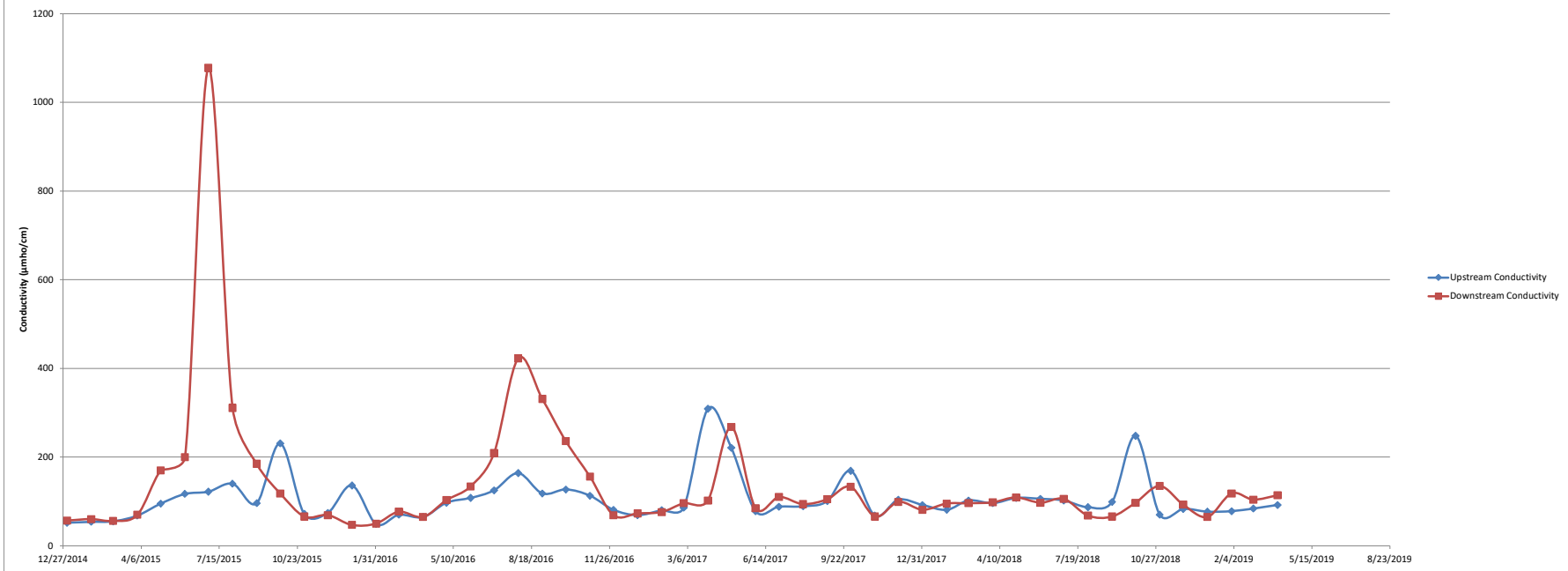


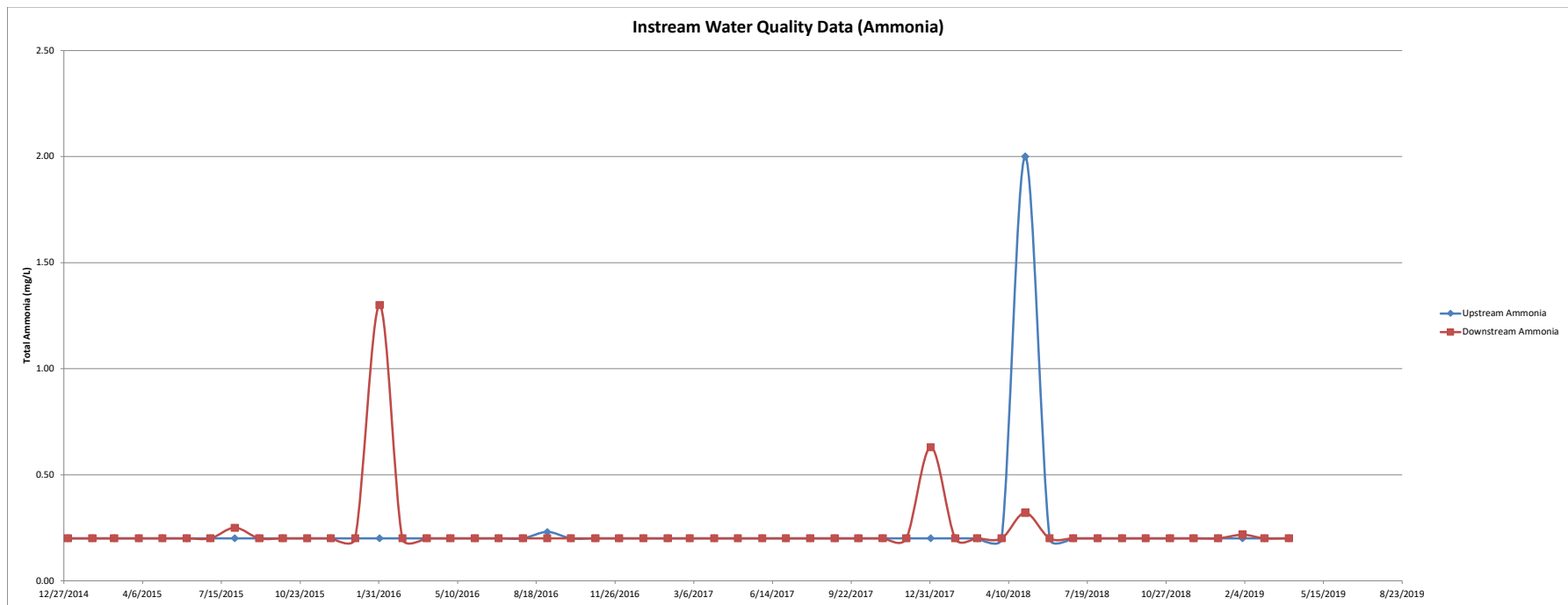


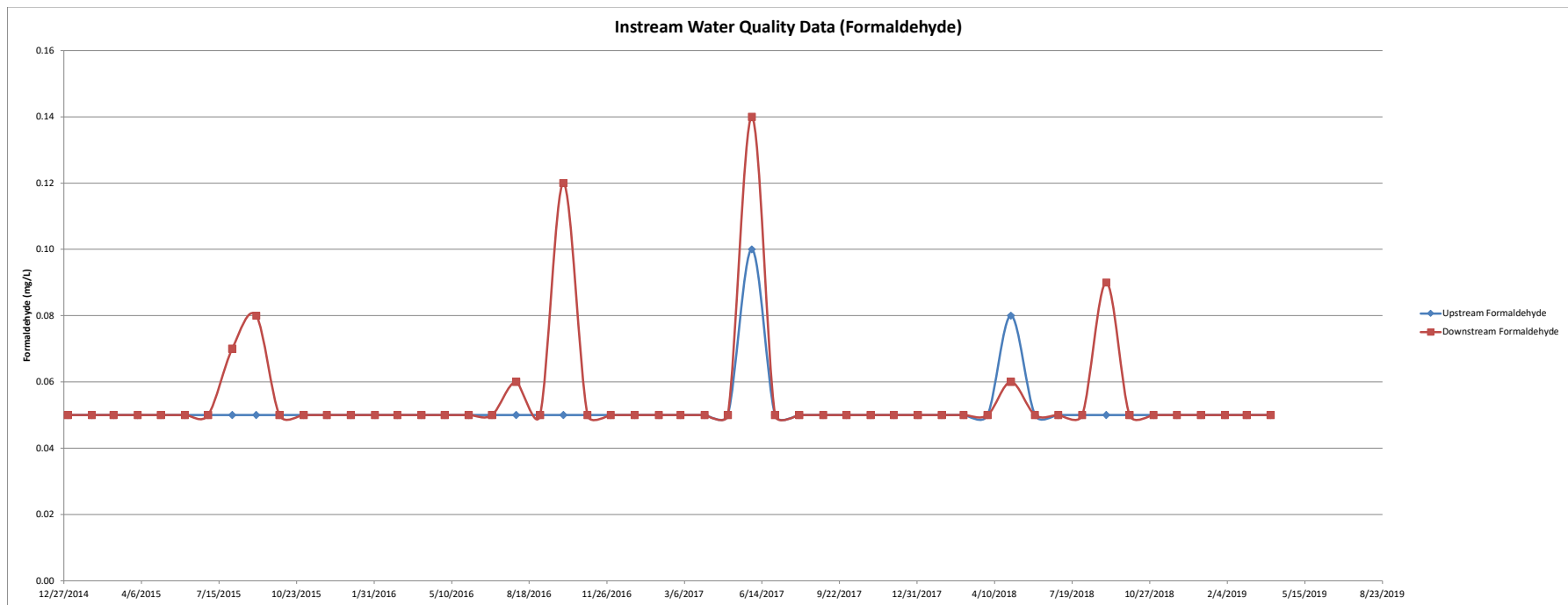
Instream Water Quality Data (Temperature)

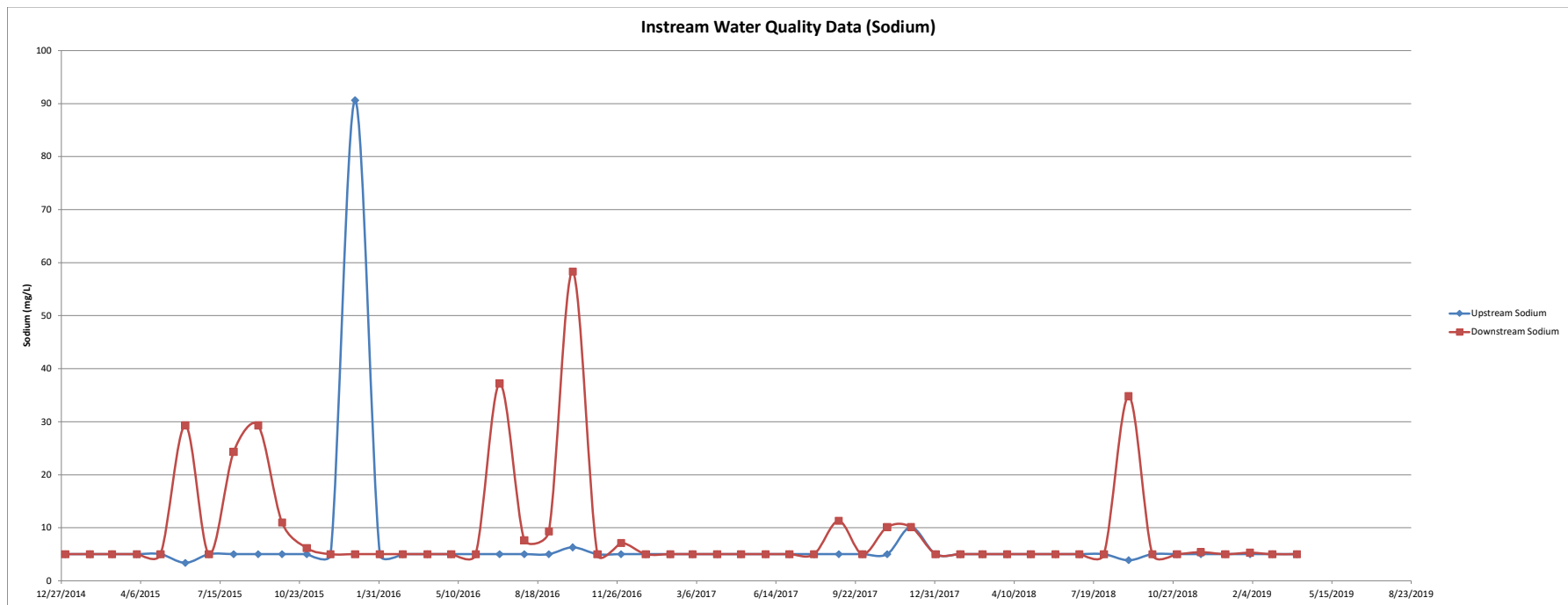


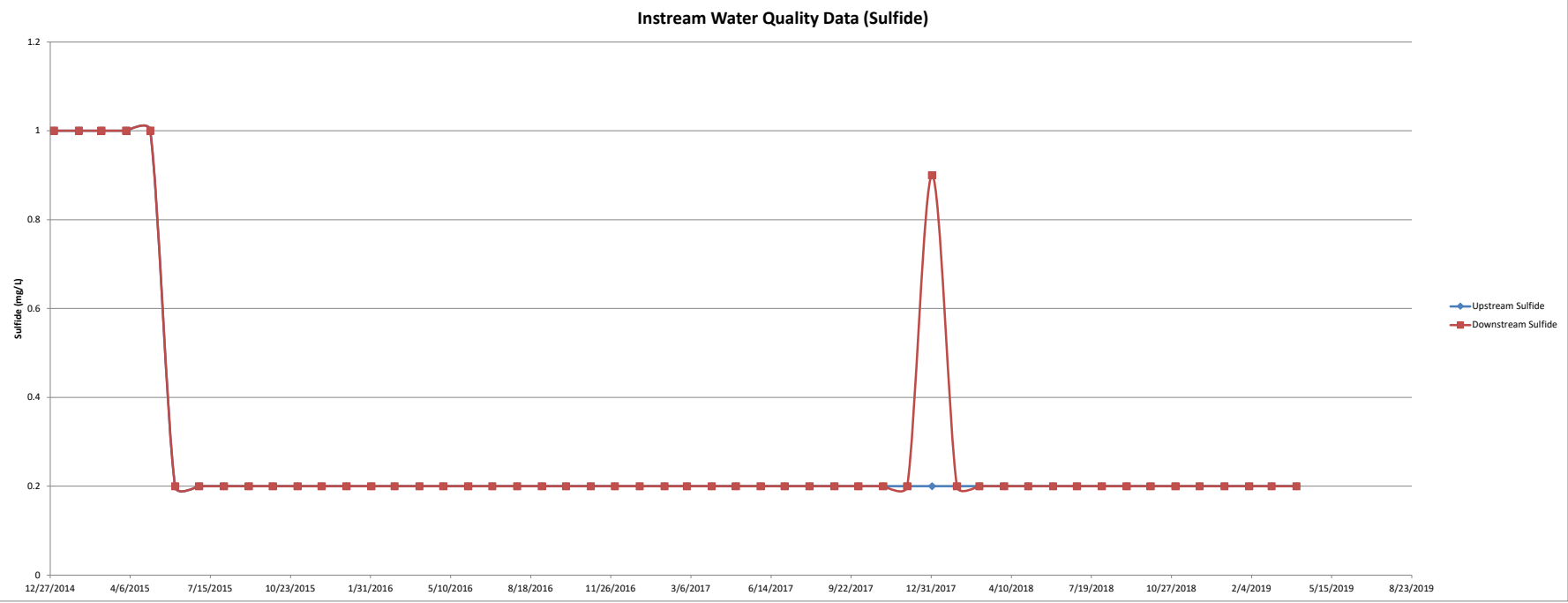
Instream Water Quality Data (Conductivity)



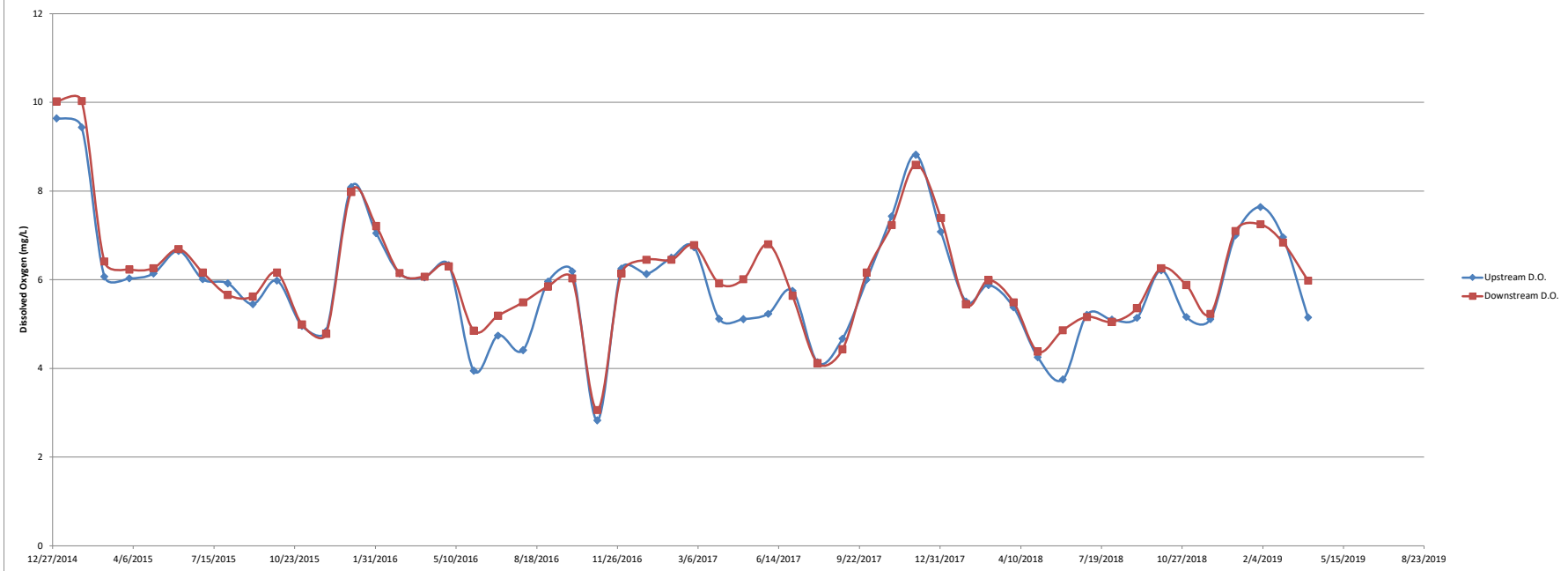


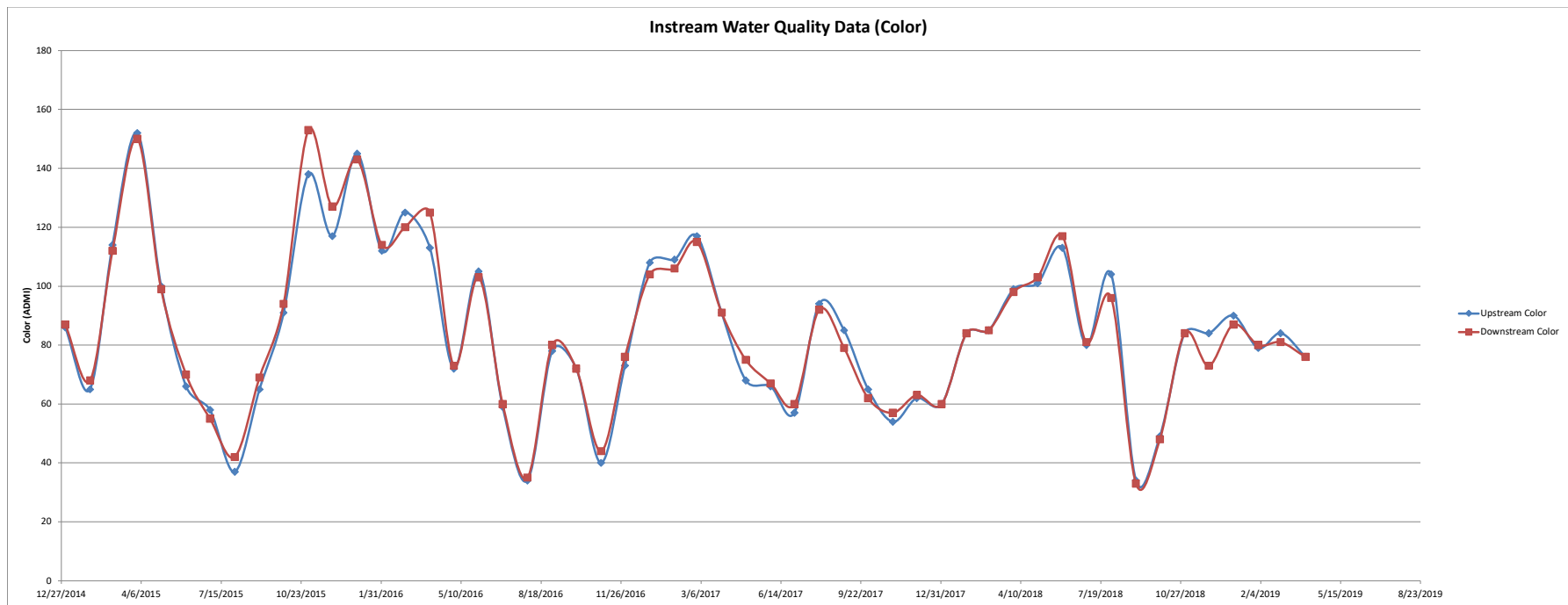






Instream Water Quality Data (Dissolved Oxygen)





Appendix I – Color Study

EPD/WPB/WRP

OCT 28 2015

RECEIVED

CERTIFIED MAIL / RETURN RECEIPT REQUESTED

October 23, 2015

Ms. Audra Dickson
Industrial Permitting Unit
Watershed Protection Branch
Georgia Environmental Protection Division
2 MLK, Jr. Dr. S.W., Suite 1152
Atlanta, GA 30334

RE: Color Study Results
King America Finishing, Inc.
NPDES Permit No. GA0003280
Screven County

Dear Ms. Dickson,

This report is being submitted to the Environmental Protection Division ("Division") to communicate the results of the color study required by Condition III.B.10 of the King America Finishing, Inc. ("King America") NPDES permit that was issued and effective on December 1, 2013.

Per the color study plan, King America collected the following samples weekly beginning February 17, 2014 and ending August 15, 2014:

- Water collected upstream of the King America discharge,
- Water collected 25 feet downstream of the King America discharge,
- Wastewater treatment plant discharge prior to the addition of the polymer for color removal, and
- Final wastewater treatment effluent after polymer dosage.

In addition, the following mixtures were prepared to replicate low stream flow color impacts:

- 92% upstream river water + 8% effluent prior to polymer treatment,
- 92% upstream river water + 8% polymer treated effluent,
- 92% upstream river water + 8% deionized water,
- 92% upstream river water + 8% 500 ADMI color standard solution.

Each of the samples and mixtures described above were analyzed for ADMI color using Method 2120E of the "Standard Methods for Examination of Water and Wastewater, 20th edition." Per the method, the color value was recorded at the original pH and after the pH was adjusted to 7.6.

The results of the analyses are summarized in Table 1 of Appendix A.

For validation of the data, a theoretical ADMI value was calculated for each mixture, assuming a basic mixing model. For example, for the mixture of 92% river water and 8% 500 ADMI color standard, the theoretical ADMI value was calculated as follows:

$$[River/Standard Mixture Result] = (92\% \times [Upstream River Result]) + 8\% \times 500]$$

The theoretical ADMI color values for the mixtures are tabulated in Table 2 of Appendix A. The theoretical color values were plotted against the actual color values to observe the degree of correlation. These plots are shown in Figure 1 of Appendix B.

Please note that the ADMI Color method requires filtration of samples prior to color analysis, and at the beginning of the study, all of the mixtures were prepared prior to filtration. However, after ten (10) weeks of the study, it became apparent from the validation process described above that the 500 ADMI color standard was being filtered out of the sample to a significant degree, resulting in ADMI color values well below the expected values. This was not observed in other mixtures. To correct this, on April 23, the facility begin filtering the river sample prior to mixing it with the ADMI color standard and analyzing for color. The subsequent results for the color standard mixture were in line with theoretical values, so the procedure was continued through the end of the study. For the purpose of the subsequent analysis of the color standard mixture results, only the results from April 23 to the end of the study were considered.

The range of the coefficients of determination (R^2) for the correlation plots is 0.92 to 0.98, indicating the basic mixing model is capable of predicting the ADMI color values of mixtures to a high degree.

The color difference (result – upstream river result) was also calculated for each sample and mixture. The color differences are summarized in Table 3 of the Appendix A. The current King America Permit includes a limit of a difference of 80 ADMI color units. Graphs of the results compared to the 80 unit color difference are in Figures 2 and 3 of Appendix B.

The average and maximum color difference are summarized in Table 4 of Appendix A. The following observations can be made regarding the information in this table:

- The average color difference in all cases is below the generally accepted Method Detection Limit (MDL) of this method of 25 ADMI Color Units. Therefore, the average color difference is within the error of the ADMI method and can be considered negligible.
- The maximum color differences for all scenarios that replicate fully mixed conditions, with the exception of the 500 ADMI standard, are also below the generally accepted MDL, and are therefore within the error of the method. These increases can also be considered negligible. The

scenario that uses the 500 ADMI cannot be considered representative of the discharge since King America's effluent color values have been consistently below 160 ADMI Color Units.

- The maximum color differences for all scenarios that do not replicate fully mixed conditions are very low (less than two times the MDL). Since the King America discharge mixes rapidly in the stream, these maximum color differences would not be observed in-stream. They are useful, however, in demonstrating that even under worse case conditions, the color difference would be insignificant.

Based on these observations, it is apparent that the King America discharge has a negligible impact on the color of the receiving stream, even under low stream flow conditions. As a result, King America respectfully requests that no color limitations, whether based on the effluent value or in-stream color difference, be applied in the facility permit.

If you have any questions or need any additional information, please contact Lee Slusher of Milliken & Company's Corporate Environmental Department for more information at lee.slusher@milliken.com or (864) 503-1756.

Thank you,



Robert Lanier
Plant Manager
King America Finishing, Inc – Longleaf Plant

Cc: Mr. Bruce Foisy, EPD

Appendix A

Table 1 - Analytical Results

Sample Date	Sample 1 (S1) River, Upstream of Discharge		Sample 2 (S2) River, 25-ft downstream of discharge		Sample 3 (S3) Aeration Basin, Prior to Polymer Addition		Sample 4 (S4) Effluent, Prior to Discharge		Mixture 1 (M1) 92% Upstream + 8% Aeration Basin		Mixture 2 (M2) 92% Upstream + 8% Effluent		Mixture 3 (M3) 92% Upstream + 8% Deionized		Mixture 4 (M4) 92% Upstream + 8% 500 ADMI Std.	
	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.
February 17, 2014	62	67	60	63	53	61	50	58	63	63	70	68	60	54	71	68
February 19, 2014	53	58	56	69	67	65	63	63	53	58	53	58	51	54	47	53
February 27, 2014	71	69	67	68	53	53	49	51	62	70	68	67	60	63	67	69
March 7, 2014	64	61	64	62	44	45	48	47	57	64	63	62	60	59	51	51
March 13, 2014	66	68	68	66	73	76	67	69	63	78	68	68	62	65	57	57
March 19, 2014	90	89	86	89	63	66	60	60	90	97	89	90	80	89	67	64
March 26, 2014	76	82	75	78	65	65	62	62	77	78	76	74	69	71	61	56
April 4, 2014	73	85	75	80	60	63	58	58	76	79	75	73	68	70	60	55
April 12, 2014	105	107	105	108	45	47	42	43	102	98	98	95	99	96	65	59
April 16, 2014	101	104	105	99	48	51	49	52	103	97	101	98	97	95	68	60
April 23, 2014	108	110	107	106	65	66	57	57	106	113	104	104	100	102	126	127
April 28, 2014	100	102	92	94	130	127	136	129	104	109	104	106	93	95	132	132
May 7, 2014	100	97	93	101	77	79	79	76	105	105	100	101	91	94	120	123
May 14, 2014	101	99	95	98	78	77	75	77	104	103	102	101	92	95	122	125
May 21, 2014	99	122	98	107	79	75	73	58	96	104	96	103	93	100	121	119
May 29, 2014	83	87	82	85	69	67	64	62	83	84	82	81	79	84	107	106
June 4, 2014	88	83	87	84	56	59	56	56	84	83	84	86	80	83	102	110
June 11, 2014	76	75	77	78	76	77	75	77	77	79	77	79	73	72	97	94
June 21, 2014	89	90	83	86	69	67	66	67	70	72	74	73	75	74	102	110
June 25, 2014	70	71	70	71	79	67	65	65	72	71	72	72	68	69	97	99
July 2, 2014	47	50	48	47	62	61	59	61	59	55	56	58	50	52	89	90
July 9, 2014	40	41	39	40	39	41	36	37	39	40	39	39	35	38	69	70
July 16, 2014	32	34	38	36	59	58	56	55	33	34	38	39	36	35	65	66
July 21, 2014	35	33	30	31	50	48	52	50	32	33	32	31	27	33	61	61
July 30, 2014	73	77	74	74	49	49	48	49	68	70	70	72	66	67	96	97
August 6, 2014	56	56	55	56	28	28	46	47	49	50	54	53	48	49	80	77
August 15, 2014	59	61	60	63	80	72	75	79	69	62	62	62	56	56	88	86
Minimum	32.0	33.0	30.0	31.0	28.0	28.0	36.0	37.0	32.0	33.0	32.0	31.0	27.0	33.0	47.0	51.0
Average	74.7	77.0	73.7	75.5	63.6	63.3	61.7	62.0	73.9	75.9	74.3	74.6	69.2	70.9	84.7	84.6
Maximum	108.0	122.0	107.0	108.0	130.0	127.0	136.0	129.0	106.0	113.0	104.0	106.0	100.5	102.0	132.0	132.0

OCT 29 2015

RECEIVED

Table 2: Mixtures – Analytical Results and Theoretical Calculations

Sample Date	Mixture 1 (M1)			Mixture 2 (M2)			Mixture 3 (M3)			Mixture 4 (M4)			Theoretical 1 (T1)			Theoretical 2 (T2)			Theoretical 3 (T3)			Theoretical 4 (T4)		
	92% Upstream +		8% Aeration Basin pH Adj.	92% Upstream +		8% Effluent pH Adj.	92% Upstream +		8% Deionized pH Adj.	92% Upstream +		8% 500 ADMI Std. pH Adj.	92% Upstream +		8% Aeration Basin pH Adj.	92% Upstream +		8% Effluent pH Adj.	92% Upstream +		8% Deionized pH Adj.	92% Upstream +		8% 500 ADMI Std. pH Adj.
	Original	63		Original	70		Original	60		Original	54		Original	68		Original	61		Original	62		Original	67	
February 17, 2014	63	63		68	70		60	60		71	54		68	68		67	67		66	62		67	67	
February 19, 2014	53	58		58	53		51	51		47	54		53	58		54	59		58	53		58	53	
February 27, 2014	62	70		68	67		60	60		67	63		69	68		70	68		68	70		69	71	
March 7, 2014	57	64		63	63		60	60		51	59		51	51		62	60		60	63		61	64	
March 13, 2014	63	78		68	68		62	62		57	65		57	57		67	69		68	66		69	66	
March 19, 2014	90	97		89	90		80	80		67	89		64	64		88	87		87	90		90	90	
March 26, 2014	77	78		76	76		69	69		61	71		56	56		75	81		80	76		82	76	
April 4, 2014	76	79		73	75		68	68		60	70		55	55		72	83		73	73		85	73	
April 12, 2014	102	98		95	98		99	99		65	96		59	59		100	102		102	105		106	104	
April 16, 2014	103	97		101	101		97	97		68	95		60	60		97	100		100	101		103	101	
April 23, 2014	106	113		104	104		100	100		126	102		127	127		105	106		104	106		110	108	
April 28, 2014	104	109		106	104		93	93		132	95		132	132		102	104		104	100		103	100	
May 7, 2014	105	105		101	100		91	91		120	94		123	123		98	96		95	100		98	100	
May 14, 2014	104	103		102	102		92	92		122	95		125	125		99	97		97	101		99	101	
May 21, 2014	96	104		103	96		93	93		121	100		119	119		97	118		118	99		121	99	
May 29, 2014	83	84		82	82		79	79		107	84		106	106		82	85		85	83		87	83	
June 4, 2014	84	83		84	84		80	80		102	83		110	110		85	81		81	88		83	88	
June 11, 2014	77	79		79	77		73	73		97	72		94	94		76	75		76	75		75	76	
June 21, 2014	70	72		74	74		75	75		102	74		110	110		87	88		87	88		89	88	
June 25, 2014	72	71		72	72		68	68		97	69		99	99		71	71		71	70		71	70	
July 2, 2014	59	55		56	56		50	50		89	52		90	90		48	51		48	51		48	48	
July 9, 2014	39	40		39	39		35	35		69	38		70	70		40	41		41	40		41	40	
July 16, 2014	33	34		38	38		36	36		65	35		66	66		34	36		34	36		34	32	
July 21, 2014	32	33		32	32		27	27		61	33		61	61		36	34		34	35		33	35	
July 30, 2014	68	70		72	70		66	66		96	67		97	97		71	75		71	75		73	73	
August 6, 2014	49	50		54	53		48	48		80	49		77	77		54	54		55	55		56	56	
August 15, 2014	69	62		62	62		56	56		88	56		86	86		61	62		60	62		61	59	
Minimum	32	33		32	32		27	27		47	33		51	51		34	34		34	34		33	32	
Average	74	76		74	74		69	69		85	71		85	85		74	76		74	76		75	75	
Maximum	106	113		104	104		100	100		132	102		132	132		105	118		104	118		121	108	

Table 3: Color Differences (Result-Upstream)

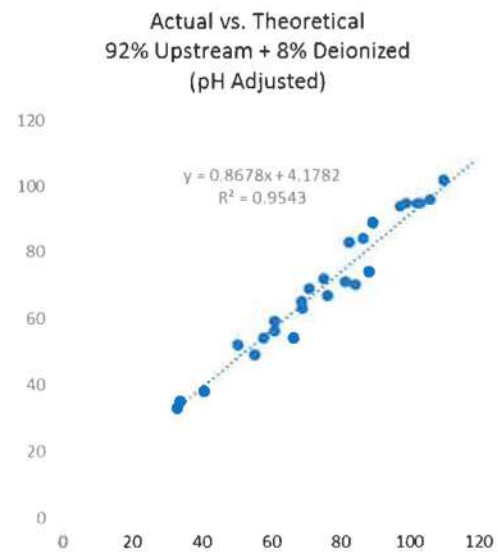
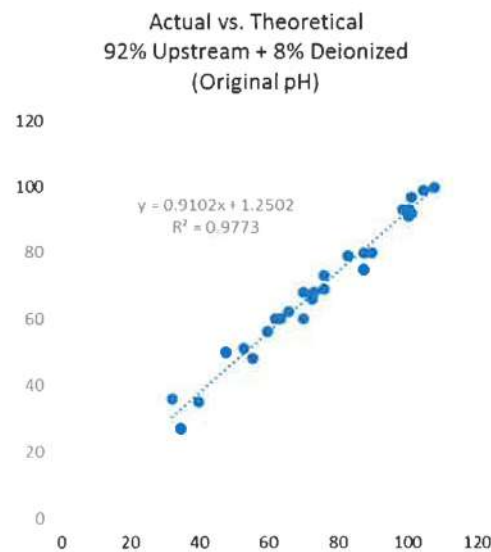
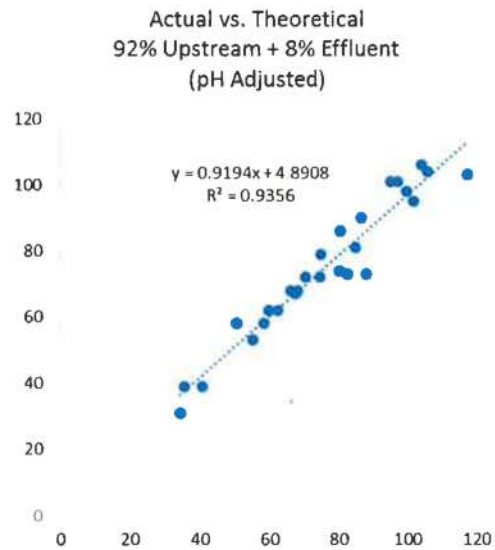
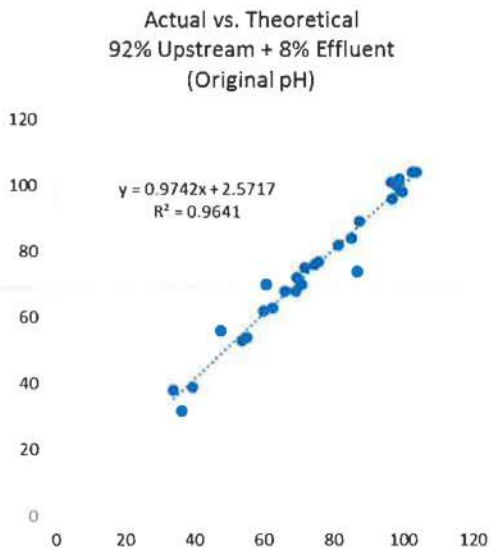
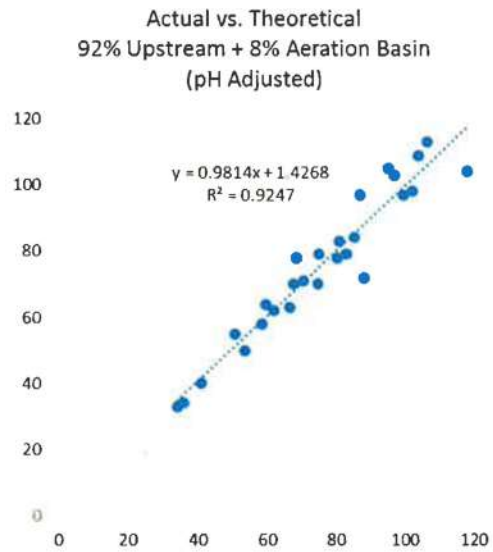
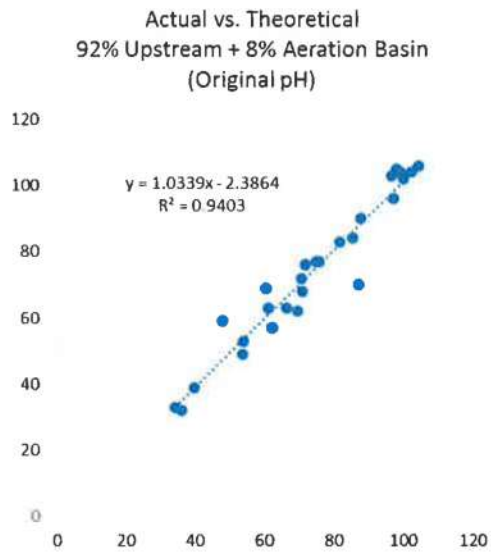
Sample Date	S2-S1		S3-S1		S4-S1		M1-S1		M2-S1		M3-S1		M4-S1	
	River, 25-ft downstream of discharge		Aeration Basin, Prior to Polymer Addition		Effluent, Prior to Discharge		92% Upstream + 8% Aeration Basin		92% Upstream + 8% Effluent		92% Upstream + 8% Deionized		92% Upstream + 8% 500 ADMI Std.	
	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.	Original	pH Adj.
February 17, 2014	-2	-4	-9	-6	-12	-9	1	-4	8	1	-2	-13	9	1
February 19, 2014	3	11	14	7	10	5	0	0	0	0	-2	-4	-6	-5
February 27, 2014	-4	-1	-18	-16	-22	-18	-9	1	-3	-2	-11	-6	-4	0
March 7, 2014	0	1	-20	-16	-16	-14	-7	3	-1	1	-4	-2	-13	-10
March 13, 2014	2	-2	7	8	1	1	-3	10	2	0	-4	-3	-9	-11
March 19, 2014	-4	0	-27	-23	-30	-29	0	8	-1	1	-10	0	-23	-25
March 26, 2014	-1	-4	-11	-17	-14	-20	1	-4	0	0	-7	-11	-15	-26
April 4, 2014	2	-5	-13	-22	-15	-27	3	-6	2	-12	-5	-15	-13	-30
April 12, 2014	0	1	-60	-60	-63	-64	-3	-9	-7	-12	-6	-11	-40	-48
April 16, 2014	4	-5	-53	-53	-52	-52	2	-7	0	-6	-4	-9	-33	-44
April 23, 2014	-1	-4	-43	-44	-51	-53	-2	3	-4	-6	-8	-8	18	17
April 28, 2014	-8	-8	30	25	36	27	4	7	4	4	-7	-7	32	30
May 7, 2014	-7	4	-23	-18	-21	-21	5	8	0	4	-9	-3	20	26
May 14, 2014	-6	-1	-23	-22	-26	-22	3	4	1	2	-9	-4	21	26
May 21, 2014	-1	-15	-20	-47	-26	-54	-3	-18	-3	-19	-6	-22	22	-3
May 29, 2014	-1	-2	-14	-20	-19	-25	0	-3	-1	-6	-4	-3	24	19
June 4, 2014	-1	1	-32	-24	-32	-27	-4	0	-4	3	-8	0	14	27
June 11, 2014	1	3	0	2	-1	2	1	4	1	4	-3	-3	21	19
June 21, 2014	-6	-4	-20	-23	-23	-23	-19	-18	-15	-17	-14	-16	13	20
June 25, 2014	0	0	9	-4	-5	-6	2	0	2	1	-2	-2	27	28
July 2, 2014	1	-3	15	11	12	11	12	5	9	8	3	2	42	40
July 9, 2014	-1	-1	-1	0	-4	-4	-1	-1	-1	-2	-5	-3	29	29
July 16, 2014	6	2	27	24	24	21	1	0	6	5	4	1	33	32
July 21, 2014	-5	-2	15	15	17	17	-3	0	-3	-2	-8	0	26	28
July 30, 2014	1	-3	-24	-28	-25	-28	-5	-7	-3	-5	-7	-10	23	20
August 6, 2014	-1	0	-28	-28	-10	-9	-7	-6	-2	-3	-8	-7	24	21
August 15, 2014	1	2	21	11	16	18	10	1	3	1	-3	-5	29	25
Minimum	-8.0	-15.0	-60.0	-60.0	-63.0	-64.0	-19.0	-18.0	-15.0	-19.0	-14.0	-22.0	-40.0	-48.0
Average	-1.0	-1.4	-11.1	-13.6	-13.0	-14.9	-0.8	-1.1	-0.4	-2.4	-5.5	-6.1	10.0	7.6
Maximum	6.0	11.0	30.0	25.0	36.0	27.0	12.0	10.0	9.0	8.0	4.0	2.0	42.0	40.0

Table 4: Summary of Average and Maximum Color Differences

Scenario #	Sample Results	pH	Average Increase versus Upstream Color	Average Increase Below MDL	Maximum Increase versus Upstream Color	Maximum Increase Below MDL	Replicates Fully Mixed Effluent?
1	River, 25-ft downstream of discharge	Original	-1	Yes	6	Yes	Yes
		Adjusted	-1	Yes	11	Yes	
2	Aeration Basin, Prior to Polymer Addition	Original	-11	Yes	30	No	No
		Adjusted	-14	Yes	25	No	
3	Effluent, Prior to Discharge	Original	-13	Yes	36	No	No
		Adjusted	-15	Yes	27	No	
4	92% Upstream+8% Aeration Basin	Original	-1	Yes	12	Yes	Yes
		Adjusted	-1	Yes	10	Yes	
5	92% Upstream+8% Effluent	Original	0	Yes	9	Yes	Yes
		Adjusted	-2	Yes	8	Yes	
6	92% Upstream+8% Deionized Water	Original	-6	Yes	4	Yes	Yes
		Adjusted	-6	Yes	2	Yes	
7	92% Upstream+8% 500 ADMI Std.	Original	10	Yes	42	No	Yes
		Adjusted	8	Yes	40	No	

Appendix B

Figure 1: Mixture Results versus Calculated Theoretical Values



EPDWPBWRP

OCT 29 2015

RECEIVED

Figure 2: Color Differences (Samples – Upstream)

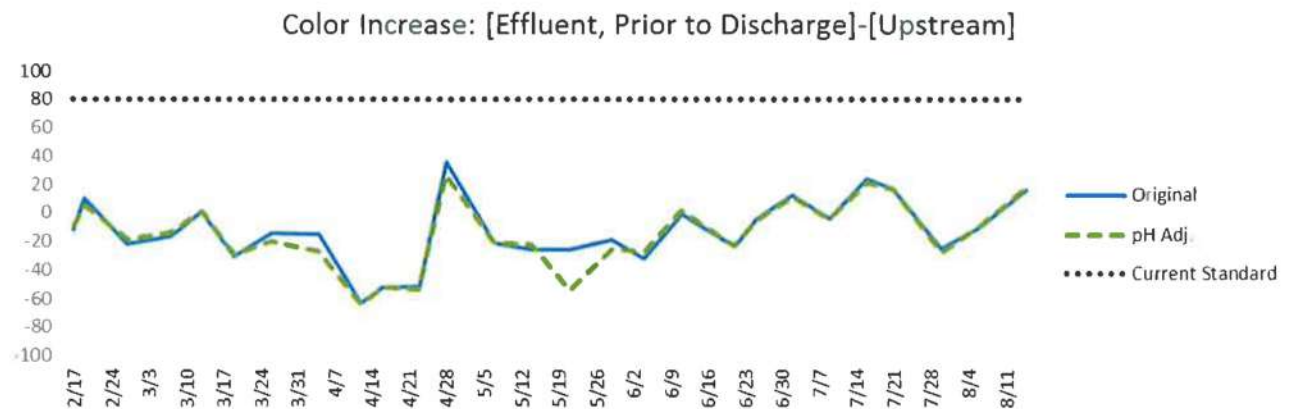
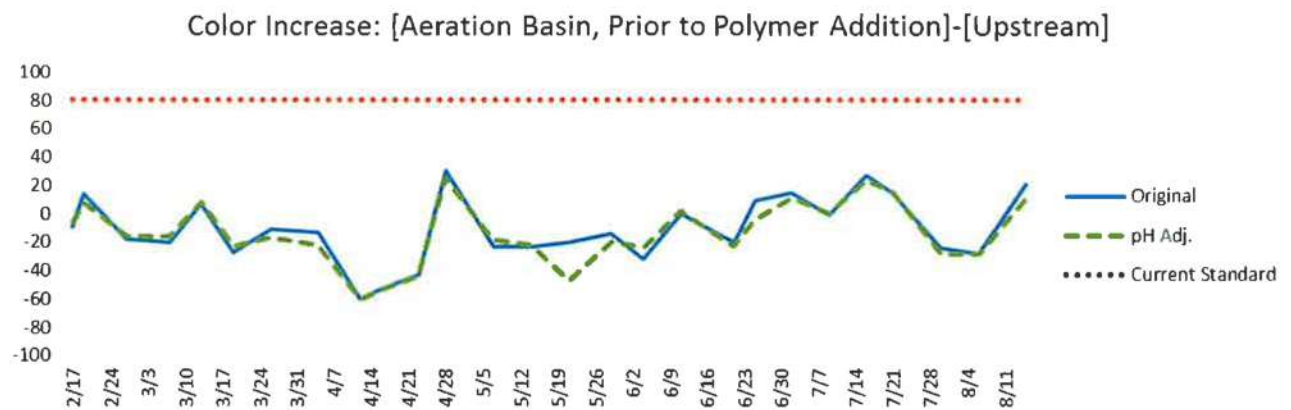
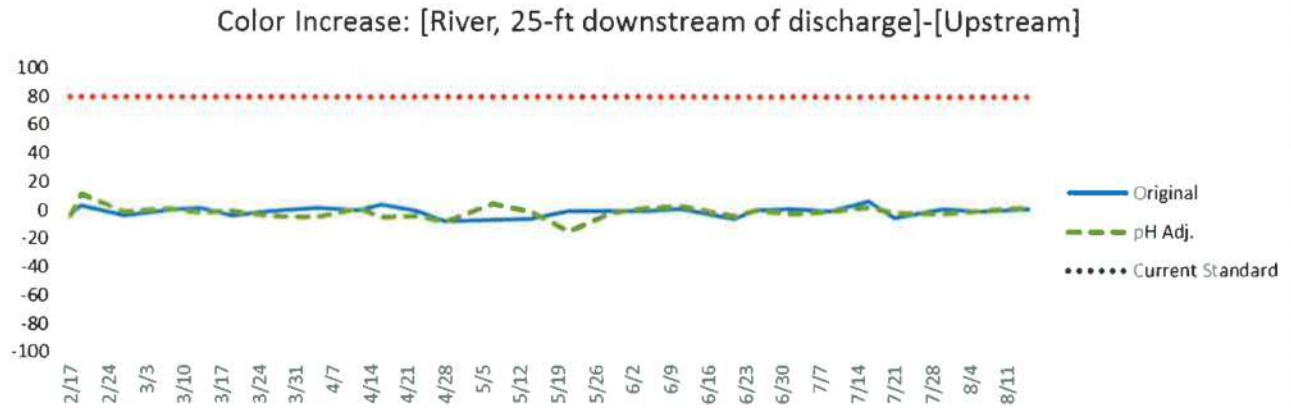


Figure 3: Color Differences (Mixtures – Upstream)

