Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
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Judson H. Turner, Director

DEC 2 9 2015

Persons Who Commented on Permit

RE: Rayonier Performance Fibers LLC
NPDES Permit GA0003620

Dear Concerned Citizen(s):

Thank you for your comments concerning the application submitted by Rayonier Performance Fibers for the reissuance of their NPDES permit. The Environmental Protection Division (EPD) has performed a detailed technical review and has carefully considered the comments received by EPD during the public hearing and during the comment period for the draft NPDES permit.

Attached is EPD's response to comments received during the public comment period and at the public hearing. In addition, EPD has made some modifications to the draft permit. A list of those changes can be found in the attached fact sheet addendum.

EPD has determined that the permit meets all necessary requirements and is protective of the environment. Therefore, EPD has issued the permit.

We appreciate your interest in this matter and your continuing support for Georgia's environmental programs.

Sincerely,

Jeff Larson, Assistant Branch Chief
Watershed Protection Branch

JL\awl
Attachment:
Response to comments and fact sheet addendum

Public Comments and EPD Responses on Draft NPDES Permit
Rayonier Performance Products – GA0003620

COMMENTS RECEIVED	EPD RESPONSE
1. Permit does not contain a reasonable potential analysis for color.	As stated in the Permit Fact Sheet, an analysis of the available color data provided in the NPDES permit application and historical discharge monitoring data indicates there may be a reasonable potential for color in the effluent discharge which may cause or contribute to an in-stream water quality standard violation. To ensure protection of the water quality standard, daily maximum and daily average effluent limits have been developed and included in the draft permit. In addition, EPD is requiring that Rayonier conduct the Altamaha River Study (River Study) which will include collection of additional information and data necessary to determine if the receiving water is impaired for color. If EPD determines that the receiving water is impaired for color, EPD may reopen the permit to include more stringent effluent limits.
2. Permit does not contain a reasonable potential analysis for odor.	As stated in the Permit Fact Sheet, at this time, there is no available numeric odor data to conduct a numeric reasonable potential analysis to determine if the effluent discharge will cause or contribute to a water quality standard violation. EPD has performed numerous site inspections and, based on observations by EPD staff, determined there is no discernable odor due to the facility's discharge in the receiving water. EPD has therefore concluded that based on the available information to date, there is no reasonable potential for the discharge to cause or contribute to a water quality standard violation. However, EPD is requiring that Rayonier conduct the River Study to collect additional information and data required to

COMMENTS RECEIVED	EPD RESPONSE
	evaluate the effluent discharge and potential impact on the receiving stream. If EPD determines that the receiving water is impaired for odor, EPD may reopen the permit to include an applicable effluent limit to protect water quality standards.
3. Permit does not contain a reasonable potential analysis for turbidity.	As stated in the Permit Fact Sheet, at this time, there is no available numeric turbidity data to conduct a numeric reasonable potential analysis to determine if the effluent discharge will cause or contribute to a water quality standard violation. EPD has performed numerous site inspections and, based on observations by EPD staff, determined that there is no discernible turbidity due to the facility's discharge in the receiving water. EPD has therefore concluded that, based on the available information to date, there is no reasonable potential for the discharge to cause or contribute to a water quality standard violation. However, EPD is requiring that Rayonier conduct the River Study to collect additional information and data required to evaluate the effluent discharge and potential impact on the receiving stream. If EPD determines that the receiving waters are in fact impaired for turbidity, EPD may reopen the permit to include an applicable effluent limit to protect water quality standards.

COMMENTS RECEIVED	EPD RESPONSE
4. I would like EPD to require Rayonier to upgrade its wastewater treatment facility to an activated sludge treatment system (AST). It may pinch financially, but if it is done over a 5-7 year period, I believe shareholders of the company – and I am one – would find that acceptable. A conditional permit should be reviewable annually for AST progress.	Rayonier's wastewater treatment system will meet the effluent limits in the draft permit. There is no applicable data to suggest that an activated sludge treatment system is necessary to meet the current or proposed effluent limits.
5. This permit needs to have updated and stronger restrictions in regards to the output of harm being done to the water and life around and within it. Smells, discoloring of water, and turbidity surely carries harm to all people and nature. This permit strongly needs to be revised for the safety and future of all.	The draft permit contains more stringent permit requirements and limits when compared to the previous permit. EPD utilized the applicable Federal Code of Regulations (CFR) and the Georgia Water Quality Control Act (Rules) to ensure the draft permit is legal, enforceable and protective of human health and the environment. Please refer to EPD responses Nos. 1, 2 and 3 of this document for additional permitting information regarding color, odor and turbidity.
6. The odor of the discharge is highly offensive and causes many fishermen to avoid fishing downstream, yet the permit includes nothing to deal with this odor problem.	Please refer to EPD response No. 2 of this document for permitting information regarding odor. In addition, Module No. 5 of the River Study is designed to collect specific data which will allow EPD to better evaluate if the effluent discharge is causing or contributing to a water quality standard violation.
7. The study only addresses the extent to which color interferes with fishing, not whether the	The narrative water quality standard for color is based on a legitimate use of the receiving water as stated in the Rules, Chapter 391-3-6-.03(5)(c). Please refer to EPD response No.

COMMENTS RECEIVED	EPD RESPONSE
discharge causes a substantial visual contrast and thus the study will do nothing to address the aesthetic concerns caused by the discharge.	1 of this document for permitting information regarding color.
8. The permit removes the incorporation of water quality standards and thus is backsliding. EPD removed the language in the prior permit that courts have found incorporates the standards by reference.	On March 31, 2015, Judge Lisa Wood concluded that the 2001 permit did not include a reference to the narrative water quality standard. For further information on this case, please refer to the Georgia Southern District Court, Brunswick Office, Case No. 2:2014cv00044.
9. Draft permit fails to ensure compliance with WQS for color, odor, and turbidity. The permit as proposed does not comply with legal requirements with respect to color, odor, and turbidity. EPD has failed to meet its legal obligations under 40 C.F.R. 123.4(d) by not incorporating permit conditions that protect legitimate uses of state waters and achieve applicable water quality standards.	Please refer to EPD responses Nos. 1, 2 and 3 of this document for permitting information regarding color, odor and turbidity.
10. Include Georgia's narrative water quality standards into Rayonier's permit as enforceable permit conditions.	The water quality standards in the Rules are in-stream standards. EPD is required by the Rules to perform a reasonable potential analysis on information submitted with an NPDES permit application to determine if there is a reasonable potential for the discharge to cause or contribute

COMMENTS RECEIVED	EPD RESPONSE
	to a violation of these in-stream standards. Appropriate effluent limits and/or conditions will be included in a permit if EPD determines that a reasonable potential exists for violating a water quality standard.
11. Rayonier's discharge violates the Federal Clean Water Act and Georgia water quality regulations.	EPD has evaluated the submitted permit application and supporting documentation and proposed a permit in accordance with the applicable Federal and State laws and regulations.
12. There is no permitted flow and there should be. The quantity of flow has a direct bearing on the quality of the discharge. Similar plants elsewhere have substantially less flow per ton of pulp produced than Rayonier. The permit should include permit limits on flow of at least 50% less than Rayonier's current levels of flow.	While flow is part of the calculation of mass based limits as contained in the draft permit, and in that way is limited, it does not in and of itself determine effluent quality. Effluent quality is assured through the installation of properly designed wastewater treatment units and through appropriate facility operational strategies for meeting assigned discharge limits. Additionally, Part II.A.1 of the permit contains requirements ("Notification of Changes") which require Rayonier to notify EPD of any planned expansions of increases in production capacities. EPD will then re-evaluate permit effluent limits at that time to ensure water quality standards are being protected.
13. The discharge of the plume is very prominent	Please refer to EPD response No. 1 of this document to obtain

COMMENTS RECEIVED	EPD RESPONSE
when viewed from an airplane even when the discharge of color is under 250 tpd.	permitting information regarding effluent color.
14. The (river) study included in the permit is inadequate and does not ensure that adequate permit limits will be enforced. There have been previous studies and much data collected on this facility, so that it is fair to ask: why now, after all these years, should another study be undertaken rather than the imposition of firm, protective permit limits? If there must be a study, much more protective limits must be put in place in the interim. The permit must ensure compliance with water quality standards during the pendency of the study.	Neither EPD or Rayonier have conducted previous studies to evaluate color, odor or turbidity. Please refer to EPD responses Nos. 1, 2, and 3 of this document to obtain permitting information regarding EPD's evaluation of the submitted NPDES permit application and supporting documents and the assignment of effluent limits and conditions necessary to protect water quality standards. The permit effluent limits and conditions may be later modified, if necessary, based on the results of the River Study.
15. The River Study does not address odor.	Module No. 5 in the River Study addresses odor. Fish tissues and river water will be analyzed for compounds which may be associated with organoleptic effects to determine if the narrative water quality standard for odor is being protected.
16. The River Study does not address turbidity.	Both Module No. 1 and Module No. 3 of the River Study address turbidity.

COMMENTS RECEIVED	EPD RESPONSE
17. The River Study does not have an end point.	The River Study includes specific deadlines and milestones for the completion of the 5 modules.
18. EPD should translate the results of the River Study to effluent limits	Based on the results of the reasonable potential analysis, EPD has already included effluent limits in the draft permit that are protective of water quality standards. However, as stated above, based upon the results of the River Study, EPD may reopen the permit to modify effluent limits and conditions, where appropriate.
19. The study only addresses designated use, not legitimate use. The study's announced purpose is to "develop data to determine if the designated use (fishing) of the river is impaired." Thus, the study only addresses the narrative water quality standards for color that interferes with fishing. The water quality standards prohibit interference with legitimate uses, not just designated uses.	Module No. 3 of the Study Plan is to determine if there is a color and odor impairment in the River by conducting River Use Surveys. Various users of the river will be surveyed to see if the river is meeting its legitimate use. The users will be questioned to determine if they avoid using and eating fish from the river within the vicinity of the Mill and why they make the choices they make. The results of these surveys will be statistically evaluated to determine if the legitimate use of the river is being met.
20. The use for annual average effluent limits for	EPD has included daily maximum and daily average effluent

COMMENTS RECEIVED	EPD RESPONSE
color is unacceptable.	color limits in addition to the annual average effluent color limits in the draft permit.
21. The permit fails to contain adequate limits for BOD. It is generally accepted that as color and BOD are reduced, the tendency to cause offensive tastes and odor is also reduced.	With respect to BOD, GA EPD used the steady state water quality model, Georgia DOSAG, to analyze if the BOD_5 limits in the permit meet the in-stream dissolved oxygen standards. The model predicted under critical low flow and high temperatures a dissolved oxygen level less than 5 mg/L at the current monthly average permit limit. Therefore, a new monthly average BOD_5 limit for the summer months was proposed that would meet the in- stream dissolved oxygen standard. The monthly average BOD_5 limit for the summer months was reduced from 22,300 lb/day to 18,560 lb/day, a 16.4% reduction. The model did not predict an adverse impact on in-stream dissolved oxygen levels during the winter months. EPD will utilize the results of the River Study to evaluate potential correlations between Rayonier's discharge and receiving water condition.
22. The effluent limitations fail to include limits and/or monitoring requirements for dissolved oxygen.	The reduced BOD_5 effluent limits in the draft permit were established to protect the in-stream dissolved oxygen water quality standard. Additionally, Rayonier will continue to monitor in-stream dissolved oxygen to evaluate continued protection of the water quality standard.

COMMENTS RECEIVED	EPD RESPONSE
23. The sampling location and the use of combined outfalls is not justified.	Outfall Nos. 1 and 2 for the permitted facility are at separate geographic locations but due to the close proximity of the outfall locations the discharges were modeled as if a single outfall. Mass based quantities for BOD and TSS are added and reported as a combined number.
24. Reasonable potential was not conducted on other toxic pollutants.	As referenced on page 12 of the Fact Sheet, a reasonable potential analysis was conducted on all constituents believed present in the submitted NPDES permit application and supporting documentation. Additionally, a review of the submitted whole effluent toxicity tests was performed and the report indicated that there were no observed toxicity effects from the effluent discharge.
25. Rayonier uses chlorides – binary compounds of chlorine - in extensive amounts during their bleach process. Chlorine is a very reactive element that forms chlorides (salts) when mixed with any reactive metal elements, and	The data submitted in the NPDES permit application and other supporting documents do not suggest that chlorides in the discharge cause or contribute to a violation of water quality standards. Therefore, limits and monitoring requirements for chloride are not included in the draft permit. In addition, elemental chlorine was also eliminated from the

COMMENTS RECEIVED	EPD RESPONSE
limits on it discharge should be included in the permit.	bleaching operations.
26. The permit should contain concentration limits in addition to the mass limitations.	The Federal Effluent Guidelines, for 40 CFR Part 430, Subpart A – Dissolving Kraft Subcategory are given as mass limitations. The assigned mass limits are protective of water quality standards. The Dioxin (2,3,7,8-TCDD) effluent limit is concentration based and protective of water quality standards.
27. There has been inadequate investigation into the water quality impacts of the unlined treatment ponds.	The groundwater monitoring plan was approved on December 8, 2005, and developed in accordance with 40 CFR Part 258 Subpart E – Groundwater Monitoring and Corrective Action 258.50-258.55 and the Georgia Department of Natural Resources "Manual for Groundwater Monitoring." The submitted reports have been evaluated as part of the permit reissuance process and do not suggest that there is a violation of water quality standards.
28. Take action to correct the environmental damage at Rayonier and other sites across Georgia. I have urged your agency to screen for Aeromonas bacteria in the Chattahoochee watershed for over a year and have received no response whatever. I guess yours goals are established by economic directives. So this year I will begin with 'grass roots'	Comment noted.

COMMENTS RECEIVED	EPD RESPONSE
recruitment. If our public officials have there own agenda, let us discover the peoples voice.	
29. The Altamaha River is vital to the Georgia coastal estuaries. Another study only delays necessary action on Rayonier's old permit. Rather than upholding the Clean Water Act, Georgia EPD is giving this company a pass on the current standards of this permit, which have been violated in the past. Water color is not only an aesthetic issue, but the entire ecology of the river by affecting the kind of biological organisms that will thrive in the river. EPD is obligated to set standards that keep Georgia's ecosystems healthy. I am writing today to urge the state to do the right thing for the Altamaha and require tougher restrictions on Rayonier's discharge to address longstanding problems with color, turbidity, and odor. This issue has been unaddressed for way too long, leading to the desecration of this water. It can be changed through your actions. I have seen immense changes once legislators and businesses decide to make our waterways safer and clean. I urge you to do you part to make sure Rayonier stop its harmful discharge.	The permit contains more stringent permit requirements and limits when compared to the previously issued permit. EPD utilized the applicable Federal Code of Regulations (CFR) and the Georgia Water Quality Control Act (Rules) to ensure the permit is legal, enforceable and protective of human health and the environment. Please refer to comment Nos. 1, 2, and 3 of this document to obtain additional permitting information regarding color, odor, and turbidity. In addition, the results of the River Study will be used to evaluate the need for modified effluent limits.

COMMENTS RECEIVED	EPD RESPONSE
Rayonier should not be allowed to continue to discharge at levels that we know cause serious discoloration of the river and an offensive odor, preventing many fishermen from fishing downstream. Allowing Rayonier to conduct a "study" with no defined end point and with no guarantee of tighter permit limits is just another word for delay, doing nothing to address the aesthetic concerns caused by the discharge. Clearly, the permit application must include narrative water quality standards about offensive color and odor, keeping our rivers safe and pristine. I oppose the granting of the wastewater permit allowing Rayonier to continue dumping wastewater into the river.	
30. We support issuing a permit for Rayonier. We live on Cathead Creek in McIntosh County in Darien and there is no problem with water quality, fish, or odor. I am writing in support of Rayonier Performance Fibers LLC receiving a NPDES permit to discharge treated wastewater into the Altamaha River.	Comments noted.

Public Comments and EPD Responses on Draft NPDES Permit
Rayonier Performance Products – GA0003620

COMMENTS RECEIVED	EPD RESPONSE
The Brunswick-Golden Isles Chamber of Commerce appreciates the opportunity to express its support for the renewal of the NPDES permit for Rayonier. Rayonier has provided a better quality of life to the citizens of Wayne and surrounding counties for many years. The proposed permit will be the strictest NPDES permit ever issued to this facility. It establishes more stringent limits for certain parameters, strict new limits for compounds associated with pulp bleaching, and significant new monitoring requirements for both the final effluent and the internal bleach plant effluent streams.	

Fact Sheet -Addendum

Rayonier Performance Fibers
NPDES Permit No. GA0003620
November 30, 2015

APPLICATION FOR REISSUANCE OF A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE STATE OF GEORGIA

Were there any revisions between the draft and final permit? If yes, please specify:

☒ Yes, Revisions were made. Please see below ☐ No Revision

Draft Permit

- Page 2, Part I.A.1 - Daily maximum (344 tons/day) and daily average (229 tons/day) color effluent limits were incorporated into the permit.

- Page 7, Part 1.B.2 the following language was modified to allow for electronic reporting:

2. Reporting

a. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the Discharge Monitoring Report (DMR). The results of each sampling event shall be reported on the Operating Monitoring Report (OMR) and submitted as an attachment to the DMR. The DMR and OMR and any other required forms, reports and/or information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person who has the authority to act for or on behalf of that person, and submitted to EPD, postmarked no later than the 15th day of the month following the reporting period.

b. However, upon final approval from EPD to use the online NetDMR application for the submittal of DMRs and OMRs required by this permit, the permittee shall submit the DMRs and OMRs to EPD utilizing the online NetDMR submittal process. The permittee shall submit the DMR no later than 11:59 p.m. on the 15th day of the month following the reporting period.

c. Signed copies of these and 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.

d. All instances of noncompliance not reported under Part I.B. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

e. Unless otherwise specified in this permit, quarterly samples shall be taken during the periods January-March, April-June, July-September, and October-December. Semiannual samples shall be taken during the periods January-June and July-December. Results from these samples shall be reported to the EPD on the monitoring report for the last month of the period. Results of annual samples will be reported on the June monitoring report.

- Page 18, Part III.B the paragraph title was modified from "Special Requirements" to "Special Conditions"

- Page 18, Part III.B.1 the following language was revised to:

"In accordance with Consent Order No. EPD-WQ-4837, as amended, the permittee shall meet the color limits specified in the below referenced timeline. The limits are based on an annual average as defined in this permit using a calendar year from January 1 through December 31. For calendar year 2015, the annual average color discharge limit is 270 U.S. tons/day. Beginning on March 6, 2016, the annual average color discharge limit is the lesser of: (i) 250 tons per day, or (ii) 115% of the average of the color discharge for the 12 months immediately preceding March 6, 2016.

- Page 18, Part III.B.1 the following numeric effluent limit and deadline was removed from the table since the permittee is currently required to meet the March 6, 2015 Annual Average Color Discharge effluent of the 270 U.S. tons/day.

Deadline	Annual Average Color Discharge
January 6, 2013	300 U.S. tons/day

- Pages 19-20, Part III.B.7 the following Special Condition was added to the permit:

7. In-stream Monitoring

1. The permittee shall collect and analyze samples of the discharge receiving waters for BOD_5, dissolved oxygen, pH and temperature, twice per month during the months of May through November and report the data in accordance with Part 1.B.2 of this permit.

a. Samples shall be taken from the U.S. Highway Bridge, the Rayonier marker just upstream from the confluence of

Penholloway Creek and the Altamaha River and the monitoring station at Everett City.

b. Sampling shall be done near midstream or at a point which is judged to be representative of the Altamaha River. Sampling shall be taken when flows are less than 10,000 cfs and when the river is at steady state flow conditions. The time of the collection at various points shall coincide with time of travel for the river.

c. The river stage and associated flow at Doctortown shall be reported during periods scheduled for sampling whether or not sampling is actually conducted at that time.

2. The data from the in-stream monitoring described above shall be used by EPD to refine and update the current stream model. Upon review of the data, if there is a potential to cause or contribute to a water quality violation, EPD may reopen this permit to include applicable permit conditions.

- Page 20, Part III.B.8 the following Special Condition was added to the permit:

8. The permittee shall continue to implement and submit the required information from the Groundwater Monitoring Plan approved by EPD on December 5, 2005.

Attachment A – Altamaha River Study

- Page 1, Purpose, the following language was revised to "The permittee shall conduct a water quality study of the stretch of the Altamaha River (River) upstream and downstream of the Rayonier facility in Jesup, Georgia. The purpose of the study plan is to develop data to determine if the designated use (fishing) of the River is impaired."

- Page 1, Sampling Quality Assurance Plans

  - The word "Creel" was modified to "River Use Survey"
  - The word "SQAPP" was modified to "SQAP"
  - The word "will" was modified to "shall"

- Page 1, Data Management, the following language was added to the Study Plan: "Sampling data for each of the Modules referenced herein shall be compiled in a project database maintained in a Microsoft Office Excel format for maximum accessibility and compatibility with publically available software packages of all involved parties. Any field notes taken at the time of sampling, including instrument calibration notes, shall be scanned and linked to the Excel file."

- Page 3, Study Elements, the word "will" was modified to "shall"

- Page 4, Submittal Deadline, the following language was added to the fourth sentence, "the raw data and"

- Page 7, Module No. 3 - River Use Surveys, the following Goals and Study Elements were modified as follows:

Goal

1. Document, through the performance and analysis of the surveys, whether there is a color, and/or odor "impairment" in the River adjacent to the Rayonier facility in Jesup, Georgia.
2. Document 1) whether boaters and anglers frequent or avoid locations within the vicinity of the mill's outfalls; 2) whether the anglers consume fish from these locations; and 3) observations about why they make the choices they do.
3. Compile available data on recreational use of the River, i.e. fishing tournaments, boating events, etc.

Study Elements

The Surveys shall be conducted by a qualified 3rd party contractor and all of the Study Elements of Module No. 3 listed below shall be included in the SQAP and approved by EPD before the Surveys are performed.

1. EPD shall review and approve the Survey questionnaire(s) and schedule for appropriate randomized survey periods.
2. The Surveys shall include a written mail out Survey and a verbal on the River Survey. All responses shall be anonymous.
3. For the mail out Survey, the 3rd party contractor shall identify a representative population, at a minimum, by identifying those who have boating and fishing licenses in a regionally representative area.
4. For the on the River Survey, the Survey shall, at a minimum, be verbally asked to recreational users on the River to a regionally representative population upstream and downstream of the discharge location.
5. The permittee shall verbally notify EPD in advance of the randomized on the River Survey dates to provide EPD staff an opportunity to observe the Survey. Notification procedures shall be described in the SQAP.
6. The analysis of the Surveys shall utilize an appropriate statistical method to evaluate the Survey population and the responses. A sufficient sample size shall be identified in the SQAP and shall take into consideration the anticipated mail in response rate.

7. The individual raw data and results of the Surveys shall be submitted to EPD.

8. Concurrent with the Survey, Module No. 1 color and turbidity samples of the River downstream of outfall 2 shall be taken at locations identified in the approved SQAP on the Survey days on the River and analyzed.

Fact Sheet

- Page 1, 1.a was modified to include "(Rayonier PF)".
- Page 3, PROPOSED EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS, was modified to include a daily maximum (344 tons/day) and daily average (229 tons/day) color effluent limits into the permit.
- Pages 12-15, were modified to include the following language:

Color

On March 6, 2008, EPD executed Consent Order EPD-WQ-4837 (Order), as amended, requiring Rayonier PF to install equipment, perform a color balance, and meet all other obligations contained in the Order, as amended to meet a color limit within a prescribed timeline as described in the Order. All of the equipment was installed prior to the scheduled deadlines. As required by Condition No. 3.c. of the Order, the annual average color limits are included in this permit renewal as stated in the below referenced table:

Deadline	**Annual Average Color Discharge**
March 6, 2015	270 U.S. tons/day
March 6, 2016	115% of the average of the color discharge for the immediately preceding 12 months, not to exceed 250 U.S. tons/day annual average

The color reduction projects required in the Order(s), as amended were intended to represent Best Management Practices for color control and formed the technology basis for the limits established in the Order. As provided and described by the permittee, below is a list of Color Reduction Projects and their impacts to reduce and control color in the final effluent. Based upon EPD's reasonable potential analysis (discussion in the below paragraph) EPD has included numeric daily average and daily maximum effluent limits for color.

Color Reduction Projects

Project	Date Installed
Sumps (8), A,B,C Mills, Rec. and Evaps.	2006 – 2012
Spill collection, A, B, C mills	2007 – 2012
B mill — BSW improvements	2008
Replace No. 2 outfall diffuser	2010
Accumulator heat exchanger	2008
C mill washing and spill collection	2012
DAF and solids dewatering	2013
Knot handling and pressing	2012 – 2013
New evaporators	2013
A mill – BSW improvements	2014

Highlights of the major projects and the impact on color reduction and control:

- Improved Brown Stock Washing (BSW): Implemented improvements to the washing stages to the A, B, and C mills. The improved washing lowers carryover of chemicals in pulp that goes to the bleach plant, reducing discharges of color to wastewater treatment.
- Increased Spill Collection Capacity: The installation of sumps and additional spill collection capacity improved black liquor spill collection and control, reducing black liquor spill discharges to wastewater treatment.
- Increased Evaporator Capacity: An additional set of evaporators was installed. The evaporators concentrate black liquor from the process and the spill collection systems so it can be burned for energy and chemical recovery rather than being discharged to the wastewater treatment system.
- Dissolved Air Flotation (DAF) Units: DAF systems were installed in the B and C mills to treat certain filtrate streams that contain significant concentrations of color. The DAF technology captures color from these streams with solids that can be burned as fuel.

As stated above, the Order required the permittee to employ technology to reduce the amount of color discharged from the facility. In 2007, EPA published the "Background Information Document for Permit Writers: Dissolving Kraft and Dissolving Sulfite Pulp Mills," as background information and guidance for NPDES permit writers in developing effluent limits for the dissolving kraft pulp

mills. EPD used this document and the EPA Technical Support Document for Water Quality-based Toxics Control (TSD) to develop effluent limits for color.

EPD evaluated 577 data points from January 1, 2014 to July 31, 2015 to develop the proposed effluent limits for color. Using the mean and standard deviation of the data, a calculation (derived from the Engineering Statistics Handbook by NIST/Sematch) was used to determine tolerance intervals for a normal distribution. This calculation provided an upper one-sided tolerance interval based on a 95th percentile of 229.35 tons per day. This upper one-sided tolerance interval is translated to the daily average limit based on the EPA TSD document. Based on the EPA NPDES Permit Writers Guide and EPD's best professional judgement, the daily max has been calculated by multiplying the daily average by 1.5, resulting in a daily maximum effluent limit of 344 tons per day.

c. Reasonable Potential Analysis for Turbidity, Color and Odor

In order to perform the reasonable potential analysis for turbidity, color or odor for the permitted discharges, EPD must determine under what conditions, if any, materials from the discharge which produce turbidity, color or odor interfere with legitimate water uses [see Rule 391-3-6-.03(5)(c)], and provide a meaningful and technically sound translation of the narrative standard language into measurable criteria. This is reflected in the 2012 303(d) listing for the stream segment receiving the permittee's discharges, which places the segment in Category 3 because there is insufficient data to determine if the designated use of the River is being met. EPD has worked with both EPA and the permittee to develop a study to collect additional data needed to assess potential impairment and conduct additional reasonable potential analysis and then, if needed, impose applicable more stringent effluent limits on the permittees discharge.

Turbidity

At this time, there is no available numeric turbidity data to conduct a numeric reasonable potential analysis to determine if the effluent discharge will cause or contribute to water quality standard violations in the receiving stream which interfere with the legitimate water use of the receiving waters. EPD has performed numerous site inspections and as observed by EPD staff determined that there is insignificant discernable turbidity in the receiving water which may interfere with the legitimate water use of the receiving water, upstream or downstream of the permittee's effluent discharge. EPD has concluded that based on the available information to date, there is no reasonable potential for the discharges to cause or contribute to a water quality standard violation.

However, as stated above, EPD is requiring the permittee to perform the Altamaha River Study, attached to this permit, to collect additional information and data required to evaluate the receiving stream, the effluent discharge and its' impact on the receiving stream. If EPD determines that the receiving waters are in fact impaired for turbidity, EPD may reopen the permit to include an applicable effluent limit in the permit to protect the water quality standards.

Color

An analysis of the available color data provided in the NPDES permit application and historical discharge monitoring data indicates there may be a reasonable potential for the color in the effluent discharge to cause or contribute to a water quality standard violation in the receiving stream which may interfere with the legitimate water use of the receiving waters. Based on currently available information, the current performance of the installed technology is sufficient to meet the narrative water quality standard. To ensure the protection of the narrative water quality standard, EPD has developed daily maximum and daily average effluent limits based on the demonstrated performance of the installed technology.

However, as stated above, EPD is requiring the permittee to perform the Altamaha River Study, attached to this permit, to collect additional information and data required to determine if the receiving waters are impaired for color. If EPD determines that the receiving waters are in fact impaired for color, EPD may reopen the permit to include more stringent effluent limits in the permit.

Odor

At this time, there is no available numeric odor data to conduct a numeric reasonable potential analysis to determine if the effluent discharge will cause or contribute to water quality standard violations in the receiving stream which interfere with the legitimate water use of the receiving waters. EPD has performed numerous site inspections and as observed by EPD staff determined that there is insignificant discernable odor in the receiving water which may interfere with the legitimate water use of the receiving water, upstream or downstream of the permittee's effluent discharge. EPD has concluded that based on the available information to date, there is no reasonable potential for the discharges to cause or contribute to a water quality standard violation.

However, as stated above, EPD is requiring the permittee to perform the Altamaha River Study, attached to this permit, to collect additional information and data required to evaluate the receiving stream, the effluent discharge and its' impact on the receiving stream. If EPD determines that the receiving waters are in fact impaired for odor, EPD may reopen the permit to include an applicable effluent limit in the permit to protect the water quality standards.

- Page 16, Other Conditions, No. 1, the following language was revised to the following: "In accordance with Consent Order No. EPD-WQ-4837, as amended, the permittee shall meet the color limits specified in the below referenced timeline. The limits are based on an annual average as defined in this permit using a calendar year from January 1 through December 31. For calendar year 2015, the annual average color discharge limit is 270 U.S. tons/day. Beginning on March 6, 2016, the annual average color discharge limit is the lesser of: (i) 250 tons per day, or (ii) 115% of the average of the color discharge for the 12 months immediately preceding March 6, 2016."

- Page 16, Other Conditions, the following numeric effluent limit and deadline was removed from the table since the permittee is currently required to meet the

March 6, 2015 Annual Average Color Discharge effluent of the 270 U.S. tons/day.

Deadline	Annual Average Color Discharge
January 6, 2013	300 U.S. tons/day

- Page 17, the following Special Condition was added to the fact sheet:

7. In-stream Monitoring
    1. The permittee shall collect and analyze samples of the discharge receiving waters for BOD_5 , dissolved oxygen, pH and temperature, twice per month during the months of May through November and report the data in accordance with Part 1.B.2 of this permit.
        a. Samples shall be taken from the U.S. Highway Bridge, the Rayonier marker just upstream from the confluence of Penholloway Creek and the Altamaha River and the monitoring station at Everett City.
        b. Sampling shall be done near midstream or at a point which is judged to be representative of the Altamaha River. Sampling shall be taken when flows are less than 10,000 cfs and when the river is at steady state flow conditions. The time of the collection at various points shall coincide with time of travel for the river.
        c. The river stage and associated flow at Doctortown shall be reported during periods scheduled for sampling whether or not sampling is actually conducted at that time.
    2. The data from the in-stream monitoring described above shall be used by EPD to refine and update the current stream model. Upon review of the data, if there is a potential to cause or contribute to a water quality violation, EPD may reopen this permit to include applicable permit conditions.

- Page 17, the following Special Condition was added to the fact sheet:

8. The permittee shall continue to implement and submit the required information from the Groundwater Monitoring Plan approved by EPD on December 5, 2005.

- Page 18, No. 7: Attachment A: Altamaha River Study language was revised to the following:

  "The permittee shall conduct a water quality study of the stretch of the Altamaha River (River) upstream and downstream of the Rayonier facility in Jesup, Georgia. The purpose of the study plan is to develop data to determine if the designated use (fishing) of the River is impaired."

- Page 19, b. Public Hearing, the name "Jane Hendricks" was modified to "Jeffrey Larson."