

BEFORE THE NORTH CAROLINA  
ENVIRONMENTAL MANAGEMENT COMMISSION

STATE OF NORTH CAROLINA	)	
	)	
COUNTY OF WASHINGTON	)	SPECIAL ORDER BY CONSENT
	)	
IN THE MATTER OF DOMTAR	)	SOC 2015 - 01
PAPER COMPANY, LLC	)	
	)	
	)	

This SPECIAL ORDER BY CONSENT (hereinafter referred to as the "ORDER") is made and entered into pursuant to North Carolina General Statute 143-215.110 by and between DOMTAR PAPER COMPANY, LLC (hereinafter referred to as the "COMPANY" or "DOMTAR") which operates a facility in Plymouth, North Carolina ("FACILITY"), and the ENVIRONMENTAL MANAGEMENT COMMISSION, an agency of the State of North Carolina (hereinafter referred to as the "COMMISSION").

WITNESSETH:

- I. The COMPANY and the COMMISSION do hereby stipulate and agree to the following:
  - A. The COMPANY operates a pulp and paper mill (SIC codes 2611 and 2621) at 1375 NC Highway 149 N, Plymouth, Washington County, North Carolina (Facility ID 07/59/00069). The FACILITY operates under Air Quality Permit No. 04291T41 ("the Permit"), which was issued on September 10, 2014, and expires on April 30, 2017. The FACILITY is considered a "major source" under prevention of significant deterioration (PSD) regulations because Kraft pulp mills are one of the source categories listed in Section 169 of the Clean Air Act, and the FACILITY emits more than 100 tpy of a regulated compound.
  - B. In December 2011, the COMPANY submitted an air permit application to the North Carolina Division of Air Quality ("DAQ"), to construct and operate a new

Lignin Solids Removal Plant (“LSRP”) at the FACILITY (Application No. 5900069.12D).

- C. Lignin solids removal from black liquor is an emerging technology focused on production of an organic byproduct for sale. Domtar’s LSRP is the first commercial scale unit using this technology to be installed or permitted in the United States.
- D. The PSD applicability analysis prepared by the COMPANY for purposes of the LSRP permit application concluded that the proposed project would not result in a significant net emissions increase of any PSD compound. The following emissions estimates were provided in the application as compared to the PSD major modification significant emission rates (SER)<sup>1</sup>:

- PM emission impact of -204.03 tpy as compared to the 25 tpy SER
- PM<sub>10</sub> emissions impact of -93.09 tpy as compared to the 15 tpy SER
- PM<sub>2.5</sub> emissions impact of -72.04 tpy as compared to the 10 tpy SER
- SO<sub>2</sub> emissions impact of -3,351.39 tpy as compared to the 40 tpy SER
- NO<sub>x</sub> emissions impact of -1,473.84 tpy as compared to the 40 tpy SER
- H<sub>2</sub>S emissions impacts of 4.42 tpy as compared to the 10 tpy SER
- TRS emissions impacts of 6.26 tpy as compared to the 10 tpy SER
- CO emission impact of -9.63 tpy as compared to the 100 tpy SER
- F emission impact of -5.44 tpy as compared to the 3 tpy SER
- H<sub>2</sub>SO<sub>4</sub> emission impact of -1.69 tpy as compared to the 7 tpy SER
- Pb emissions impact of -0.01 tpy as compared to the 0.6 tpy SER, and
- CO<sub>2e</sub> emissions impact of 49,100 tpy as compared to the 75,000 tpy SER.

Because no commercial-scale LSRP unit was in operation at the time the permit application was prepared, this analysis necessarily relied on vendor-provided emissions data collected at a European pilot scale operation. The PSD analysis also assumed a 6.5% increase across all production rates at the FACILITY and

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<sup>1</sup> Emissions estimates include both new lignin plant addition and switch to natural gas fuel and lignin firing in the boilers. The emissions estimates are based upon baseline actual minus projected actual, except for NO<sub>x</sub> and CO<sub>2e</sub> which also netted using contemporaneous increases/decreases. See permit 04291T39 and associated permit review for a full calculus of emissions.

projected post-project fuel use. The COMPANY'S permit application included projected emissions increases from the LSRP and other affected units of 6.26 tons per year (tpy) of total reduced sulfur (TRS) and 4.42 tpy of hydrogen sulfide (H<sub>2</sub>S) as compared to the PSD major modification thresholds of 10 tpy for each of H<sub>2</sub>S and TRS.

- E. Because the anticipated increases in projected actual emissions of TRS (6.26 tpy) and H<sub>2</sub>S (4.42 tpy) as a result of the LSRP project were lower than the PSD significance levels established in 40 C.F.R. § 51.166(b)(23)(i) of 10 tpy for each of H<sub>2</sub>S and TRS, the LSRP project was not considered a "major modification" and was therefore determined not to be subject to PSD permitting requirements.
- F. DAQ approved the air permit for the LSRP on October 17, 2012. The Permit does not include emissions limitations or other control requirements for emissions from the LSRP process, but requires annual emissions of criteria pollutants from the process to be tracked, via pulp production through the fiberline, and reported to the Director as required by 15A NCAC 2D .0530(u). *See* Permit ¶ 2.2.D.
- G. The LSRP process began operation in February 2013. In late 2013 and early 2014, the COMPANY conducted testing of ambient H<sub>2</sub>S levels at the FACILITY. Test results raised concerns that actual H<sub>2</sub>S emissions of the LSRP might be higher than projected based on the vendor-supplied data relied on in the permit application for the LSRP.
- H. The COMPANY conducted a preliminary air emissions study of LSRP operations in July-August 2014. On August 22, 2014, the COMPANY notified the DAQ that, based on the results of this testing, the projected TRS emissions increase from the LSRP could exceed PSD significance levels.
- I. Based on preliminary results from the July-August 2014 emissions study, the COMPANY voluntarily began limiting daily lignin production the week of August 21, 2014, to average approximately 25 BDT or less until a better understanding could be acquired of any potential air emissions issues.
- J. The COMPANY engaged URS Corporation to develop a protocol to test uncontrolled emissions of TRS and H<sub>2</sub>S compounds from the LSRP. The

COMPANY submitted the test protocol to DAQ for approval on August 27, 2014. DAQ approved this test protocol, and in September 2014 URS conducted air emissions testing of the LSRP, per the approved protocol. A comprehensive report of test results (“the Study Report”) was delivered to DAQ on December 1, 2014. DAQ validated these test results on February 23, 2015.

- K. Based on these test results, the projected increase in emissions of TRS and/or H<sub>2</sub>S emissions based on the LSRP project appear to have exceeded PSD significance levels over the 12-month interval starting in May 2014. These projections may change as the emission factors based on preliminary test results are further refined. The estimates based on emissions factors developed from the September 2014 testing are provided below for the 12 month period ending in February 2015.

<b>Month</b>	<b>12-month Tracking (TRS Tons)</b>	<b>12-month Tracking (H<sub>2</sub>S Tons)</b>
February 2014	11.5	10.8
March 2014	11.7	10.9
April 2014	12.9	12.0
May 2014	13.4	12.6
June 2014	13.6	12.7
July 2014	13.9	12.9
August 2014	14.3	13.3
September 2014	14.5	13.5
October 2014	14.6	13.6
November 2014	14.2	13.3
December 2014	13.8	12.9
January 2015	14.2	13.3
February 2015	13.6	12.8

- L. In December 2014, the COMPANY, with the help of URS Corporation, developed and began utilizing a consecutive 12-month TRS and H<sub>2</sub>S emissions tracking program for LSRP operations, utilizing factors developed from the air emissions testing programs.

- M. On the basis of the September 2014 test data, the LSRP project is a “major modification” subject to PSD permitting requirements. 40 C.F.R. § 51.166(b)(7)(iv)(a); 15A NCAC 02D .0530.

THEREFORE, the COMMISSION and the COMPANY, desiring to resolve and settle the compliance issues between them, have agreed to enter into this ORDER with the following terms and conditions:

II. The COMPANY, desiring to operate in a safe and environmentally sound manner in accordance with the rules and regulations of the COMMISSION, does hereby agree to perform the following activities:

- A. By March 1, 2016, Domtar shall select and begin engineering design of an air quality control program to effectively mitigate uncontrolled TRS and H<sub>2</sub>S emissions from LSRP operations. Domtar shall provide a report summarizing the emissions control program that has been selected by March 1, 2016.
- B. By September 1, 2016, Domtar shall submit an application to retroactively re-permit the LSRP at its design or originally-permitted capacity with an updated PSD applicability analysis. This application shall include any additional air quality control systems and/or equipment identified as necessary to meet PSD requirements.
- C. By January 15, 2017, Domtar will submit a report with a detailed construction/installation schedule to include commencement, intermediate and final construction milestones. By March 1, 2017, Domtar shall begin construction/installation of any air quality control systems and/or equipment identified as necessary to mitigate LSRP emissions.
- D. By December 1, 2017, Domtar shall initiate operation of new air quality control systems and/or equipment.

- E. Within 180 days of commencing operation or by June 1, 2018, whichever comes first, Domtar shall conduct verification testing of LSRP operations per DAQ-approved protocol.
- F. The COMPANY agrees to pay the COMMISSION \$100,000 (one hundred thousand dollars). This sum is due and payable within thirty (30) days of the effective date of this ORDER.

III. Interim Operations. This ORDER authorizes the operation of the FACILITY for the period of time necessary to submit a revised permit application for the LSRP project, obtain DAQ approval of such permit, and install any air quality control systems and/or other equipment necessary to comply with permit conditions. Throughout the effective period of this Special Order by Consent:

1. The COMPANY may operate the LSRP up to its permitted maximum production rate of 36,211 bone dried tons (BDT) of dewatered lignin / year. Emission data across multiple production rates from the Study Test Report indicate the highest emission level occurs at a black liquor feed rate of 75 gallons per minute from the evaporators to the LSRP. The maximum potential emissions from the LSRP would be 24.7 tpy of TRS and 22.7 tpy of H<sub>2</sub>S if operated at the worst case black liquor feed rate of 75 gallons per minute from the evaporators for 24 hours a day and 365 days a year. Emissions of the remaining PSD regulated compounds are not anticipated to differ from for the projected actual emissions provided in the original permit application.
2. The COMPANY shall continue to record and report annual emissions as required by 15A NCAC 2D .0530(u) and Permit Condition 2.2.D(1)(a).
3. The COMPANY shall monitor and maintain records of the consecutive 12-month rolling total LSRP production & black liquor feed and emissions of TRS and H<sub>2</sub>S from the LSRP, utilizing DAQ approved emission factors and include the data in the semi-annual permit required report.

IV. In the event that the COMPANY fails to comply with any deadline as set out in this ORDER or fails to achieve final compliance with any applicable requirement in this ORDER, the COMPANY agrees that, unless excused under Paragraph V, the COMPANY will pay the COMMISSION stipulated penalties according to the following schedule:

<u>Deadlines and Requirements</u>	<u>Stipulated Penalties</u>
Failure to meet any deadline established in Paragraph II or in the construction milestone schedule report required in Paragraph II.C..	\$500 per day for the first 5 days and \$1000 per day thereafter.
Each month that the LSRP operates either without a PSD permit or in non-compliance with PSD permit requirements.	\$1,000 per month

**Stipulated Penalty:**

Failure within thirty (30) days of receipt of the Director's written demand to pay the penalties will be grounds for a collection action, which the Attorney General is hereby authorized to initiate. The only issue in such an action will be whether thirty (30) days has elapsed.

V. The COMPANY'S obligation to comply with the requirements set forth in this ORDER for which a stipulated penalty may be assessed may be delayed or excused only to the extent that noncompliance is caused by circumstances beyond control of the COMPANY, as determined by the Division of Air Quality Director (hereinafter referred to as the "DIRECTOR"). Contractor delays or failure to obtain funding will not be considered events beyond the COMPANY'S control. If any such delaying event occurs, the COMPANY shall notify the Division of Air Quality (hereinafter referred to as "DAQ") in writing within ten (10) days of encountering or discovering the delaying event, describing in detail the event or delay, the precise cause(s) of the event or delay, the measure(s) taken and to be taken by the COMPANY to prevent or minimize the event or delay, and the schedule by which those measures will be implemented. If the COMPANY establishes good cause for its failure to comply with any part of this ORDER, (*i.e.*, noncompliance was caused by circumstances beyond the control of the COMPANY), the DAQ and the COMPANY jointly may stipulate and agree to

a written modification of this ORDER. Extension of any compliance date pursuant to this Paragraph shall not extend any subsequent deadlines established in the ORDER unless the subsequent deadline necessarily is dependent upon completion of the earlier deadline.

VI. This ORDER shall pertain only to the equipment, sources, and operations described in Paragraph I of this ORDER. Any violation of Air Quality Standards resulting from other sources or equipment for which the COMPANY is responsible shall subject the COMPANY to appropriate enforcement action pursuant to North Carolina General Statute 143-215.114.

VII. The COMPANY agrees to waive any rights it may have to seek judicial review to challenge this ORDER or to seek a stay of enforcement of this ORDER in connection with any judicial review of the State Implementation Plan. The COMMISSION acknowledges that this waiver does not prohibit the COMPANY from seeking modification of this ORDER if any regulatory standards upon which this ORDER is based are changed subsequent to its execution. In such cases, the COMPANY may petition that the ORDER be modified to reflect those regulatory changes.

VIII. In the event the COMMISSION or the DAQ find that reports, plans, specifications, or permit applications required by Paragraph II are in any respect deficient or if additional information is necessary to comply with the requirements of North Carolina General Statutes 143-215.107 *et seq.*, any regulations promulgated thereunder, or any other applicable laws or regulations, the COMPANY shall be notified by the DAQ as soon as possible. The COMPANY shall be afforded an opportunity to modify, amend, or supplement its submissions to make such submissions complete and appropriate

IX. All notices and reports required from the COMPANY by this ORDER shall be delivered to:



Robert Fisher, Regional Supervisor  
N.C. Dept. of Environment and Natural Resources  
943 Washington Square Mall  
Washington, NC 27889

All payments required from the COMPANY by this ORDER shall be mailed, first class postage prepaid, to the following address:

Enforcement Group - Payments  
NCDENR – DAQ  
Mail Service Center 1641  
Raleigh, North Carolina 27699-1641

X. This ORDER constitutes full and final settlement and satisfaction of all matters addressed herein and any and all claims or prospective claims that the COMMISSION has or may have for violations of regulations described in Paragraph I hereof, as of the date this ORDER is approved by the COMMISSION. This ORDER shall not affect the COMPANY'S obligation to comply with any Federal, State, or local laws or regulations.

XI. Final approval and entry into this ORDER are subject to the requirements that the COMMISSION give notice of proposed consent decrees to the public, and that the public have at least thirty (30) days within which to comment on the ORDER.

XII. Should any provision of this ORDER be declared by a court of competent jurisdiction to be inconsistent with Federal or State law and therefore unenforceable, the remaining provisions hereof shall remain in full force and effect.

XIII. Any modifications of this ORDER must be agreed to in writing signed by both parties.

XIV. Except as otherwise set forth herein, this ORDER is not and shall not be interpreted to be a permit or modification of an existing permit under Federal, State or local law, and shall not be construed to waive or relieve the COMPANY of its obligations to comply in the future with any permit.

XV. This Special Order by Consent shall expire on January 1, 2019.

This the 3<sup>rd</sup> day of June, 2015.

ATTESTED:

Domtar Paper Company, LLC

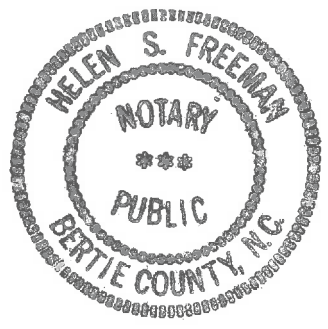
BY: *Allan M. Bohn*  
Domtar Responsible Official

APPROVED AND ACCEPTED:

BY: *Shirle Holman*  
Environmental Management Commission

DATE: 07/20/2015

State of North Carolina  
I, Helen S. Freeman Notary Pub.  
do hereby certify that Allan M. Bohn  
per my appearance before me this day and acknowledged the  
due execution of the foregoing instrument.  
Witness my hand and official seal, this 3<sup>rd</sup> day of  
June, 2015  
Helen S. Freeman Notary  
My Commission Expires Feb. 20, 2019





PAT MCCRORY  
*Governor*

DONALD R. VAN DER VAART  
*Secretary*

SHEILA C. HOLMAN  
*Director*

June 28, 2016

Mr. Allan Bohn  
Vice President/Mill Manager  
Domtar Paper Company, LLC  
PO Box 747  
Plymouth, NC 27962

SUBJECT: SOC 2015-01 Interim Date Extension  
Air Quality Permit No. 04291T43  
Domtar Paper Company, LLC  
Facility ID: 5900069, Plymouth, Martin County  
Facility Classification: Title V

Dear Mr. Bohn:

The DAQ received your June 24, 2016, request from your counsel Alan McConnell, to extend an interim deadline in your 2015-01 Special Order by Consent (SOC). Paragraph II.B. of the SOC states: *"By September 1, 2016, Domtar shall submit an application to retroactively repermit the LSRP at its design or originally permitted capacity with an updated PSD applicability analysis."* You have requested to extend this deadline by two months until November 1, 2016. The Division of Air Quality grants the request to extend the interim deadline.

The authority to grant this extension is provided in **"15A NCAC 02D .2203 PUBLIC NOTICE"** which states:

*"(f) Any Consent Order may be amended by the Director to incorporate minor modifications, such as modification of standard conditions to reflect updated versions, correction of typographical errors, or interim date extensions, in a consent order without public notice provided that the modifications do not extend the final compliance date by more than four months."*

All other interim dates and the final compliance date remain as listed in the original SOC.

Sincerely,

Sheila C. Holman, Director  
Division of Air Quality, NCDEQ

cc: Alan McConnell, Kilpatrick Townsend  
William Willets, P.E. – DAQ RCO Permitting Section Chief  
Washington Regional Office Files  
Central Files