STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

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COMMISSIONER

Verso Androscoggin LLC
Franklin County
Jay, Maine
A-203-77-14-A

Departmental
Findings of Fact and Order
New Source Review
Amendment #14

After review of the air emissions license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Verso Androscoggin LLC
LICENSE TYPE	06-096 CMR 115, Minor Modification
NAICS CODES	322121
NATURE OF BUSINESS	Pulp & Paper Mill
FACILITY LOCATION	Jay, Maine

Verso Androscoggin LLC (Verso Androscoggin) is an integrated pulp and paper manufacturing facility located in Jay, Maine. The facility is owned by Verso Paper Corporation and operated as Verso Androscoggin LLC. The facility will be referred to in this license by any of the following terms: Verso Androscoggin, the Androscoggin Mill, or the Mill. The Androscoggin Mill is an existing stationary source currently operating under a Part 70 License (A-203-70-A-I) and is considered a Part 70 major source as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). The Androscoggin Mill is located in an area that is in attainment or classified as unclassifiable for all Maine ambient air quality standards (MAAQS).

B. Amendment Description

Verso Androscoggin LLC of Jay, Maine has submitted an application in accordance with *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended) to allow the replacement of a section of the front wall of the No. 1 Recovery Boiler (RB#1). The front wall of this recovery boiler is presently showing significant Stress Assisted Corrosion Cracking (SACC) below the primary air ports. This project will return RB#1 to a fully reliable condition by replacing the four front wall tube panels from the lower header to just above the primary air ports, an eight (8) foot high section of tubes. This project will also include replacement of the smelt spouts and primary air ports and

installation of a Thermal Imaging Bed Camera. The proposed changes are to be completed during the shutdown scheduled for spring 2012.

These proposed changes have been determined to be a physical change to RB#1 and will be treated as a modification to RB#1. The changes will result in no change in the maximum design capacity of RB#1 and will not substantially extend the boiler's useful economic life. Historically, RB#1 has often been operated at 110% of maximum continuous rating (MCR). More recently, however, the Mill has limited RB#1 operating rates to not more than MCR for safety reasons. The project will return RB#1 to a condition sufficient to fire at its historically normal maximum operating rate of 110% MCR. The project will not enable RB#1 to fire above these historically normal maximum operating levels. Therefore, the project will not involve a production increase, nor will it involve an increase in emissions above historically normal maximum emission rates.

The differences in air emissions quantities between recent actual emissions and the new license allowed quantities occur because of the ability to increase safe operating rates and not from physical changes increasing rated capacity of the unit.

Under federal New Source Performance Standards (NSPS) provisions found in 40 CFR Part 60 and Maximum Achievable Control Technology (MACT) provisions found in 40 CFR Part 63, reconstruction means "the replacement of components of an existing facility or affected source to such an extent that: (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable, entirely new facility or a comparable new source; and (2) it is technologically and economically feasible to meet the applicable standards set forth in this part."

The estimated cost of this project is $2 million dollars. The cost of an entirely new recovery boiler is estimated to be $130 million dollars. Thus, the proposed project cost is 1.5 percent of the cost of a new comparable recovery boiler. Because the fixed capital cost of this project does not exceed 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, this project does not meet the definition of "reconstruction" as defined either in 40 CFR Part 60.15 (NSPS provisions) or in 40 CFR Part 63.2 (MACT provisions).

C. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Process Equipment

Emission Unit	Max. Capacity (MMBtu/hr)	Max. Processing Rate (MMlb BLS/day)	Fuel Type, % sulfur	Stack #
RB#1	315*	2.5	Black liquor; fuel oils (0.5%)	CRB**

* This is the fuel oil firing capacity only. The firing of black liquor at 2.5 MMlb BLS/day has the capacity to produce more energy output than the firing of fuel oil at maximum capacity.

**Combined Recovery Boiler Stack, through which both RB#1 and RB#2 are exhausted

D. Application Classification

The application for Verso Androscoggin does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing or record keeping requirements. Any license conditions contained in this license amendment that either alter or are in addition to existing Part 70 license conditions will be incorporated into Verso Androscoggin's Part 70 License.

This application is being processed under the New Source Review (NSR) licensing provisions contained in *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). The application includes a Best Available Control Technology (BACT) analysis performed per New Source Review requirements.

The modification of a major source is considered a major modification based on whether or not expected emissions increases exceed the "Significant Emission Increase Levels" as given in *Definitions Regulation*, 06-096 CMR 100 (as amended).

The determination as to whether or not a significant emissions increase will occur is made by performing an actual-to-projected-actual Prevention of Significant Deterioration (PSD) applicability test, which includes comparing the net emissions increases to the significant emissions increase levels on a pollutant-by-pollutant basis. Net emissions increases are determined by totaling all differences (that are above zero) between "projected actual emissions" and "baseline actual emissions" for each emissions unit, on a pollutant-by pollutant basis. If net emissions increases will be equal to or exceed significant emissions increase levels, then the modification is a major modification.

The baseline actual emissions are equal to the actual emissions from any period of 24 consecutive months within the 10 years prior to submittal of a complete license application, and the selected 24 month period can differ on a pollutant-by-pollutant basis. Verso Androscoggin has identified the time periods specified

below as most representative of normal operation of RB#1 in the 10 year allowable window based stack tests, records of boiler operation, improvements, and other operating parameters. The results of this actual-to-projected-actual PSD applicability test are as follows:

Pollutant	Baseline Actual Emissions (ton/year)	Projected Future Actual Emissions (ton/year)	Net Change (ton/year)	Significance Level (ton/year)	Major Modification? (Yes/No)
PM	77 *	79.9	2.9	25	No
PM_{10}	56 *	58	2.0	15	No
SO_2	12 **	15.3	3.3	40	No
NO_x	198 **	236	38	40	No
CO	220 **	282.2	62.2	100	No
VOC	15 *	15.3	0.3	40	No
TRS	1 **	2.3	1.3	10	No
H_2SO_4	1 **	1.2	0.2	7	No
$^{+}$GHG	488,538 *	503,323	14,785	--	--
$^{+}CO_2e$	485,629 *	503,323	17,694	75,000	No

* 1/07 – 12/08

** 1/09 – 12/10

$^{+}$ In order for a modification to be a major modification for GHG emissions, net emissions increase rates must be greater than zero for GHG emissions on a mass basis and equal or exceed significant emissions increase levels for GHG emissions in terms of CO_2e. Net emissions increase rates for GHG emissions are greater than zero on a mass basis but are significantly less than the significant emissions increase level of 75,000 TPY for GHG emissions in terms of CO_2e.

Note: The above numbers are for RB#1 only. None of the other emission units at the facility is affected by this amendment.

The projected increases in emissions are below significant emissions increase levels associated with a major modification. Therefore, this amendment is determined to be a minor modification under *Minor and Major Source Air Emission License Regulations* 06-096 CMR 115 (as amended), and has been processed as such.

E. Process Description

Before proceeding with a summary of BACT determinations and other emission standards that may apply to the modification, a general process description pertaining to RB#1 is provided to identify where the equipment fits into the process.

Verso Androscoggin is an integrated pulp and paper manufacturing facility with equipment, operations, and supporting activities designed to produce bleached kraft pulp (through a chemical pulping process) and groundwood pulp which are used to make a wide variety of pulp and paper products. The bleached kraft pulp is produced in two (2) separate lines, designated Pulp Mill A and Pulp Mill B.

Screened wood chips from the wood processing area are sent to either Pulp Mill A or Pulp Mill B. The "A" line includes a continuous digester, brown stock washing/screening units, pulp storage tanks, process liquid storage tanks, and a pulp bleaching system. The "B" line includes a continuous digester, diffusion washing units, screening units, pulp storage tanks, process liquid storage tanks, and a pulp bleaching system. The chips are reacted with white liquor in the digesters on each line to form pulp, which is then washed and screened in brown stock washers. Then, the pulp is chemically whitened in the bleaching system. Filtrate from the brown stock washers or the diffusion washers, called "weak black liquor," is collected and sent to the recovery boiler process area.

Weak black liquor received from the pulp mills is first passed through multiple-effect evaporators, where it is concentrated to a solids level that will support combustion. The more concentrated black liquor is then sent to the recovery boilers, where it is reduced to form a smelt. The smelt flows out the bottom of the boilers into the smelt dissolving tanks, where it is dissolved to form green liquor. The green liquor is reacted with lime (CaO) to form white liquor and lime mud ($CaCO_3$). White liquor is stored for subsequent use in the digesters, and lime mud is processed in the lime kilns to recover lime.

In the process of recovering pulping chemicals, the recovery boilers and other equipment not addressed in this license amendment produce steam and electric power to support mill operations.

Recovery Boiler #1 (RB#1) Background Information

RB#1 was manufactured by Combustion Engineering with a maximum process rate of 2.50 MMlb dry Black Liquor Solids (BLS) per day. It was installed at the facility in 1964 and converted to a low-odor design in 1985. The conversion of RB#1 in 1985 did not result in an emission increase on a lb/hr basis nor did the total cost of the project exceeded 50% of the fixed capital projected cost for a comparable new recovery boiler.

RB#1 is licensed to fire black liquor and fuel oil (including #6 fuel oil, specification waste oil, and off-specification waste oil). The fuel oil fired is allowed to contain a maximum of 0.5% sulfur by weight and may be used as startup/supplemental fuel. RB#1 has a maximum design heat input capacity of 315 MMBtu/hr firing only fuel oil. This capacity does not reflect output based on

the firing of black liquor. The total MMBtu/hr in steam generating capacity of the boiler firing black liquor is much higher than 315 MMBtu/hr from fuel oil only.

Flue gas emissions from RB#1 are controlled by the operation of an electrostatic precipitator (ESP). The ESP is a rigid frame, dry bottom design precipitator powered by transformer rectifier (TR) sets. The ESP has the design capacity to control emissions from both recovery boilers (RB#1 and RB#2) located at the facility. The facility currently uses a software control system to optimize precipitator performance. Compliance with emission limits has been demonstrated while operating with one chamber of the ESP while the other chamber is down for repairs. Both recovery boilers exhaust through a common 240 foot above ground level (AGL) stack.

Emissions of total reduced sulfur compounds (TRS) from RB#1 are controlled in accordance with *Total Reduced Sulfur Control from Kraft Pulp Mills*, 06-096 CMR 124. Compliance with the TRS emission limit is demonstrated through the operation of a continuous emission monitoring system (CEMS) positioned in the boiler duct prior to the ESP to measure TRS concentration and percent O_2 in the emission stream.

RB#1 is not an electric utility steam generating unit and therefore is not subject to 40 CFR Part 60, Subpart Da *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978*. RB#1 is also not subject to 40 CFR Part 60, Subpart D *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971* because RB#1's annual capacity factor for oil is less than 10 percent.

RB#1 is subject to 40 CFR Part 63, Subpart MM *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills* and the *General Provisions* contained in 40 CFR Part 63, Subpart A.

RB#1 is not subject to 40 CFR Part 63, Subpart DDDDD *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters* (Boiler MACT standards) because units covered by 40 CFR Part 63 Subpart MM *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills* are not subject to the Boiler MACT standards.

Verso Androscoggin operates a continuous emission monitoring system (CEMS) to monitor NO_x, TRS, SO_2, and O_2 in the emission stream and a continuous opacity monitoring system (COMS) on emissions from the CRB stack. The

COMS is required per the continuous monitoring system (CMS) requirements of 40 CFR Part 63, Subpart MM. Current practices for RB#1 include optimization of black liquor solids and optimization of combustion via stacked air.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each emissions unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. Verso Androscoggin is not currently located in any nonattainment areas.

BPT for new sources and modifications to existing emission units located in attainment/unclassified areas for all pollutants requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

B. BACT Determination

The following is a summary of the BACT determination for RB#1:

1. Particulate Matter (PM & PM_{10})

Particulate matter emissions from kraft recovery boilers consist mainly of sodium salts that are generated by carryover of solids and sublimation and condensation of the inorganic chemicals. Particulate matter control can be provided on recovery boilers in a variety of ways. At Verso Androscoggin, an electrostatic precipitator (ESP) employed after the non-direct-contact evaporator (NDCE) achieves particulate matter control efficiency ranging from 98 to more than 99 percent. The ESP controlling PM emissions from RB#1 consists of two parallel sides with four banks each. PM emissions from RB#1 are currently limited to 0.035 gr/dscf at 8% O_2, which is below the MACT, 40 CFR Part 63, Subpart MM applicable emission standard for PM of 0.044 gr/dscf.

According to the RACT/BACT/LAER Clearinghouse (RBLC) database, the top 15 facilities with the lowest achievable emission rates for PM utilize an ESP for control and meet PM emission limits ranging from 0.02 gr/dscf to 0.044 gr/dscf. The current PM emission limit of 0.035 gr/dscf for RB#1 is

well within the range of the top PM emission performing facilities. Verso is already utilizing an ESP to control PM emissions. The cost associated with constructing and operating additional ESP banks or of installing and operating an auxiliary scrubber to remove PM from a flue gas stream is not economically justifiable, especially given the minor nature of the proposed modification. Verso Androscoggin conducts annual maintenance and combustion tuning to maximize combustion efficiency, practices liquor optimization, and uses stacked air for combustion optimization.

The Department finds that optimized combustion efficiency and the use of an ESP to meet the current PM emission limit of 0.035 gr/dscf, corrected to 8% O_2, represents BACT for PM emissions from RB#1.

2. Sulfur Dioxide (SO_2)

Sulfur dioxide (SO_2) is formed from reduced sulfur compounds generated by the combustion of black liquor and fuel oil. Several factors influence SO_2 emission rates from recovery boilers, including the sulfur-to-sodium ratio in the black liquor, black liquor solids content, stack oxygen content, furnace load, auxiliary fuel use, furnace design, combustion air and liquor firing patterns, and other operational parameters. Available SO_2 control technologies include the following:

- combustion modifications, such as optimization of liquor properties and combustion air firing patterns,
- wet scrubbers, where a scrubbing liquid is used to remove sulfur from the flue gas,
- spray dry absorption, and
- dry sorbent injection.

Examination of the control strategies used at similar facilities to attain BACT control for recovery boilers indicates that optimization of liquor properties and optimization of combustion firing patterns appear to be the best control method for SO_2 emissions. Wet scrubbers are not feasible given the low and rapidly fluctuating levels of SO_2 within recovery boilers. Other possible control technologies have not yet been adequately proven in the industry, making installation of such devices unjustifiable at this time.

The Department finds the employment of good operating practices presently employed, including liquor optimization, combustion optimization via stacked air, and maintenance, in combination with the low-odor, NDCE design of RB #1 to meet the following, currently licensed SO_2 emission limits represents BACT for SO_2 emissions from RB#1:

- 120 ppmdv, corrected to 8% O_2, on a 30-day rolling average basis, when RB#1 is operating at a black liquor firing rate of 50% or higher; and

- 140 ppmdv, corrected to 8% O_2, on a 30-day rolling average basis, when RB#1 is operating at a black liquor firing rate of less than 50%.

The SO_2 emission limits for RB#1 will be reevaluated when emissions modeling results are available from an upcoming modification application.

3. Nitrogen Oxides (NO_x)

Nitrogen oxides emissions from fuel burning equipment are generated through three mechanisms: fuel NO_x, thermal NO_x, and prompt NO_x. Fuel NO_x is produced by oxidation of nitrogen contained in the fuel source. Combustion of fuels with high nitrogen content produces greater amounts of NO_x than those with low nitrogen content such as distillate oil and natural gas. Thermal NO_x is formed by the fixation of nitrogen (N_2) and oxygen (O_2) at temperatures greater than 3,600°F. Prompt NO_x forms from the oxidation of hydrocarbon radicals near the combustion flame, producing insignificant quantities of NO_x.

Potential control technologies for reducing NO_x emissions from recovery boilers include add-on controls such as selective non-catalytic reduction (SNCR) selective catalytic reduction (SCR), and proper boiler combustion control and air combustion optimization. The results of studies show that NO_x reduction using SNCR technology may only be effective for short-term periods. Furthermore, these studies suggest that long-term SNCR operation on kraft recovery boilers may lead to an increase in nitrogen and chlorine concentrations in the liquor, thus increasing NO_x emissions and causing fouling and plugging in the boiler due to high levels of chloride deposits.

SCR is currently not a practical option for recovery boilers because of the high temperature window (450°F to 750°F) needed for proper SCR operation. Temperatures in this range are only found in the economizer section of the recovery boiler; however, because the flue stream is still loaded with particulate at this time (pre-ESP) the catalyst would not remain effective. Utilizing SCR after the ESP would require re-heating the flue gas to the required temperature range, which is both impractical and inappropriate since it would generate additional emissions of other criteria pollutants.

The Department finds that the employment of good combustion practices to meet the currently licensed NO_x emission limit of 150 ppmdv, corrected to 8% O_2 or 12% CO_2, represents BACT for NO_x emissions from RB#1.

4. Carbon Monoxide (CO)

Emissions of CO from pulp and paper recovery boilers result from incomplete or poor combustion. The RBLC database identifies good combustion practices and post combustion controls as available CO control technologies.

Catalytic oxidation and thermal oxidation are post combustion alternatives that have been used with gas turbines and internal combustion engines firing liquid or gaseous fuels that have relatively clean exhaust gases. This technology has not, however, been proven on a recovery boiler. It is expected that fouling of the catalyst would occur due to the heavy concentration of PM in the exhaust stream physically blocking the pores of the catalyst bed. While the combustion temperatures needed for catalytic oxidation are lower than the temperatures needed for thermal oxidation (due to the presence of the catalyst), the typical range of combustion temperatures is 700°F to 900°F. Thus, placing the catalyst bed after the ESP would require re-heating the flue gas to the required temperature range, an impractical option that would generate additional emissions of other criteria pollutants.

The Department finds that the employment of good combustion practices to meet the current CO emission limit of 112.2 lb/hr represents BACT for CO emissions from RB#1.

5. Volatile Organic Compounds (VOC)

Emissions of VOCs from pulp and paper recovery boilers result from incomplete or poor combustion. The RBLC database identifies good combustion practices and post combustion controls as available VOC control technologies.

Relevant add-on control options include carbon adsorption, absorbers (scrubbers), condensers, biofilters, and thermal oxidation. The selection of a particular control technology depends on stream-specific characteristics (flow rate, hydrocarbon concentration, temperature, moisture content, etc.) and the desired control efficiency. Add-on control technologies to reduce VOC emissions are not employed on kraft recover boilers because the VOC content of the flue stream is too low for efficient and cost effective pollutant removal. A review of the RBLC database concluded that there are no facilities that are utilizing add-on control technology as BACT for VOC emissions.
The Department finds that the employment of good combustion practices to meet the current VOC emission limit of 9.4 lb/hr represents BACT for VOC emissions from RB#1.

6. Total Reduced Sulfur Compounds (TRS)

Total reduced sulfur compounds (TRS), the most common of which are hydrogen sulfide (H_2S), methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, are emitted from recover boilers. In a recovery boiler, the sodium fumes (gaseous Na and NaOH), carbon monoxide, hydrogen sulfide, and other volatile organics are oxidized as they rise through the furnace and react with secondary and tertiary air. Secondary air provides oxygen for burning the organics and to raise the lower furnace temperature. Tertiary air supplies oxygen to more fully combust all the volatile organics and reduced sulfur gases. As a result, in passing through the secondary and tertiary zones, H_2S is oxidized to sulfur dioxide. Any H_2S not oxidized at this point will not be oxidized later on in the cooling flue gases and will form the main component of TRS emissions from the furnace. The use of a non-direct contact evaporator (NDCE) minimizes TRS emissions from recovery boilers.

Efficient operation of the recovery furnace by avoiding overloading and by maintaining sufficient oxygen supply, residence time, and turbulence significantly reduces emissions of TRS. RB#1 is currently subject to a TRS emission limit of 5 ppm. Other facilities with BACT limits on recovery boiler TRS emissions were compared to the limit currently applicable to RB#1.

The Department finds that efficiently operating the recovery boiler to meet the current TRS emission limit of 5 ppmdv, corrected to 8% O_2 (measured as H_2S), represents BACT for TRS emissions from RB#1.

7. Greenhouse Gases (GHG)

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans,* 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. "Greenhouse gases" as defined in 06-096 CMR 100 (as amended) are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gases (GHG) for purposes of licensing are calculated and reported as carbon dioxide equivalents (CO_2e).

Emissions of CO_2 and other GHG from pulp and paper recovery boilers result from combustion. RB#1 emissions are primarily from biomass (black liquor solids) combustion. The CO_2 emissions that are generated from combustion of black liquor solids are considered to be biogenic GHG emissions. EPA recently decided to delay the application of PSD and Part 70 permitting requirements to CO_2 emissions from bio-energy and other biogenic stationary

source activities, pending additional review of the scientific basis for excluding CO_2 emissions from biogenic sources from permitting programs.

Fuel oil is used as an auxiliary fuel during startup and shutdown and to stabilize operations. Use of fuel oil is not expected to increase as a result of this project.

Based on the guidance currently available in the U.S. EPA document entitled "Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from the Pulp and Paper Manufacturing Industry" published in October 2010, Verso Androscoggin has identified several possible GHG reduction strategies. Available GHG reduction technologies for kraft recovery boilers include boiler maintenance, increased black liquor solids concentration, improved composite tubes for recovery furnaces, recovery furnace deposition monitoring, and quarternary air injection.

Verso Androscoggin evaluated these options and concluded as follows:

- Because of the age of RB#1, installed in 1965, and its relatively small size, it is not technically feasible to install quarternary air in RB#1.
- The lower furnace of RB#1 is equipped with composite tubes, but the upper furnace was rebuilt in 2008 with carbon steel tubes. It is not economically feasible to rebuild the upper furnace at this time to install improved composite tubes to facilitate the use of black liquor with higher dry solids content and increase the thermal efficiency of the recovery furnace. Furthermore, improvement to concentrators and evaporator sequences would be required to accommodate the increase in black liquor solids fired. Such replacements are also not economically feasible.

Based on the above discussion, Verso Androscoggin's current practices of boiler maintenance, use of falling film concentrators, reduction in recovery furnace deposition, and the presently installed composite tubes in the lower part of the furnace are technically feasible options for the reduction of GHG from RB#1. The mill proposes to improve reduction in recovery furnace deposition by installing three (3) differential pressure instruments for monitoring boiler performance to improve boiler cleaning performance and one camera for bed combustion monitoring. The current practices and the installation of the additional monitoring equipment is Verso Androscoggin's proposed BACT for GHG emissions from RB#1.

Based on the information contained in Verso Androscoggin's BACT analysis and EPA's pending status of how biogenic CO_2 emissions should be treated, the Department finds that boiler maintenance, use of falling film concentrators, reduction in recovery furnace deposition, the presently installed composite tubes in the lower part of the furnace, and improvement of

reduction in RB#1 deposition by installing three (3) differential pressure instruments for monitoring boiler performance to improve boiler cleaning performance, and installing one camera for bed combustion monitoring represents BACT for GHG emissions from RB#1. The Department does not find the determination of emission limits for GHG emissions from RB#1 appropriate or necessary at this time.

Once these additional instruments have been installed during the spring 2012 scheduled outage, the facility will require additional time to incorporate the changes into the boiler process and make the monitoring equipment operational; thus, this license does not require the inclusion of these instruments in normal operation until such time as they are installed and operational, on or about July 1, 2012.

C. Incorporation into the Part 70 Air Emission License

The requirements in this 06-096 CMR 115 New Source Review amendment shall apply to the facility upon amendment issuance. Per *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (as amended), Section 2(J)(2)(c), for a modification that has undergone NSR requirements or been processed through 06-096 CMR 115, the source must then apply for an amendment to the Part 70 license within one year of commencing the proposed operations as provided in 40 CFR Part 70.5.

D. Annual Emissions

The proposed minor modification will not result in the need to change any of the annual emission limits currently existing in Verso Androscoggin's Air Emission Licenses, including any amendments. License allowed annual emission limits remain unchanged.

III. AMBIENT AIR QUALITY ANALYSIS

Verso Androscoggin previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. Neither short term nor long term emission limits will increase as a result of the minor modification being approved in this license amendment, therefore no additional ambient air quality analysis is required for this license amendment.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.
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The Department hereby grants Air Emission License A-203-77-14-A pursuant to the preconstruction licensing requirements of 06-096 CMR 115 (as amended), which allows Verso Androscoggin to complete the repair and replacement work on RB#1 described in the application and in the findings of fact of this license amendment, and subject to the standard and special conditions below. Verso Androscoggin shall continue to be subject to the standard and special conditions listed in their initial Part 70 License, A-203-70-A-I, and in any subsequent Part 70 or New Source Review license amendments.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

Following completion of the repair and replacement work described in this license, emissions limits from RB#1 shall not change from the previously licensed limits, including all amendments.

SPECIFIC CONDITIONS

(1) Verso Androscoggin shall utilize boiler maintenance; falling film concentrators; reduction in recovery furnace deposition; and the composite tubes in the lower part of the furnace, both those presently installed and those proposed in this application, as BACT for GHG emissions from RB#1.

(2) Verso Androscoggin shall install, operate, and maintain the following on RB#1:

A. three (3) differential pressure instruments for monitoring RB#1 performance to inform improvements in boiler cleaning performance, and

B. one camera for bed combustion monitoring. [06-096 CMR 115 (as amended) BACT]

The additional camera and pressure monitoring instruments shall be installed and operational by July 1, 2012.

(3) Verso Androscoggin shall reevaluate the SO_2 emission limits for RB#1 upon availability of results of emissions modeling required for the Lo-Solids Cooking Project Major Modification application submitted to the Department in March 2012.

(4) Verso Androscoggin shall submit an application to incorporate this amendment into the Part 70 air emission license no later than 12 months from commencement of the requested changes. [06-096 CMR 140, Section 2(J)(2)(c) and 40 CFR Part 70.5(a)(1)(ii)]

DONE AND DATED IN AUGUSTA, MAINE THIS 12th DAY OF March , 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie Loyzim for
PATRICIA W. AHO, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 6, 2012
Date of application acceptance: February 14, 2012

Date filed with the Board of Environmental Protection:

This Order prepared by Jane Gilbert, Bureau of Air Quality.

Filed
MAR 13 2012
State of Maine
Board of Environmental Protection