

S.D. Warren Company)	Department Findings
Cumberland County)	Findings of Fact and Order
Westbrook, Maine)	New Source Review
A-29-77-1-M)	Amendment #1

After review of the Chapter 115 Minor Revision/Part 70 Administrative Revision application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to Chapters 115 and 140 and to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

I. Registration

A. Introduction

FACILITY	S.D. Warren Company
PART 70 LICENSE NUMBER	A-29-70-A-I
LICENSE TYPE	Chapter 115 Minor Revision
NAICS CODES	322121
NATURE OF BUSINESS	Papermill
FACILITY LOCATION	Westbrook, Maine
PART 70 LICENSE ISSUANCE DATE	December 31, 2003
NSR AMENDMENT ISSUANCE DATE	December 8, 2006
PART 70 LICENSE EXPIRATION DATE	December 31, 2008

B. Nature of Revision Request

S.D. Warren Company (S.D. Warren) of Westbrook, Maine has requested a Minor Revision under Chapter 115 and an Administrative Revision of their current Part 70 Air Emission License (A-29-70-A-I) under Chapter 140 to update/correct the Best Practical Treatment (BPT) determination for particulate matter (PM) emissions from the catalytic incinerator associated with the operation of the facility's #20 Coater machine. Specifically, S.D. Warren seeks to replace the PM emission limits set forth in Amendment #2 (A-29-70-C-A) with the PM emission limits set forth in Amendment #1 (A-29-70-B-A) and to include new recordkeeping requirements to demonstrate compliance.

C. Application Classification

Chapter 115 Minor Revision procedures may be used for a revision at a facility with a licensed emissions increase under four (4) tpy for any one regulated pollutant and under eight (8) tpy of total regulated pollutants. Part 70 Administrative Revisions procedures may be used to correct errors, to require additional recordkeeping and to incorporate other similar changes. The PM emission limits in Amendments #1 and the revised PM emission limits in Amendment #2 were established as state-only requirements through Part 70 Administrative Revision procedures. S.D. Warren now seeks to correct the PM emission limits in Amendment #2 by replacing them with the PM emission limits in Amendment #1 and to include additional recordkeeping requirements. S.D. Warren's request will amount to an increase of less than 4 ton/yr of a single criteria pollutant. Therefore this request has been processed as a Minor Revision under Chapter 115 and a Part 70 Administrative Revision under Chapter 140 and meets the requirements of such.

D. Justification for Revision Request

S.D. Warren's #20 Coater catalytic incinerator was originally given a PM emission limit of 0.12 pounds per hour (lb/hr) which was based on equipment supplier information. After having tested the incinerator for PM emissions at the Department's request in 2004, it was found that emissions were 2.1 lb/hr. The measured PM emissions rates were higher than originally expected due to catalyst attrition rates higher than originally expected. S.D. Warren requested and received a Part 70 Administrative Revision to their Part 70 Air Emissions License (Amendment #1 issued in November 2004) to correct the hourly PM emission limit for the incinerator to 4.0 lb/hr and establish an annual PM emissions restriction of 3.99 tons per year (ton/yr). Amendment #1 also required S.D. Warren to conduct additional PM emissions testing of the incinerator and submit a subsequent application to remove the 3.99 ton/yr limit from the license.

PM emissions testing for the incinerator conducted in March 2005 resulted in average PM emissions rates of approximately 0.9 lbs/hr, well less than the license limit of 4.0 lb/hr established by Amendment #1. Shortly after March 2005 testing, S.D. Warren informed the Department that it had located a catalyst (AOK-75-41) developed by Matros Technologies that was represented to have a significantly lower attrition rate than the catalyst then in use in the incinerator. Based on the new testing information and the new alternative catalyst information, the Department determined in Amendment #2 that it was appropriate to eliminate the 3.99 ton/yr limit and that a corrected BPT determination for the incinerator would be 3.0 lb/hr and continued use of clean-burning fuel (i.e., natural gas). Amendment #2 also established BPT as requiring the use of the Matros Technologies catalyst AOK-75-41 or a catalyst with similar or greater attrition resistance.

In accordance with Amendment #2, S.D. Warren conducted PM emissions testing on the incinerator in November 2006 which found that emissions were 3.65 lb/hr and therefore over the PM emission limit in Amendment #2. S.D. Warren has informed the Department that it began utilizing catalyst AOK-75-41 in November 2005 and that records of hours of operation and the amount of catalyst used in the incinerator indicate that the new catalyst attrits at lower rates than the previous catalyst and that PM emissions from catalyst attrition on a long term average basis are approximately 1 lb/hr.

Based on the PM emissions test results of the incinerator and the catalyst attrition rates demonstrated by mass balance of the catalyst used in the process, the Department concludes that the PM emission limits established in Amendment #1 more appropriately reflect BPT for PM emissions from the incinerator than the PM emissions limits established in Amendment #2. Therefore, the Department determines that BPT is the reinstatement of the PM emissions limits in Amendment #1 (i.e., 4.0 lbs/hr and 3.99 tons/year). BPT will also require S.D. Warren to demonstrate compliance with the 3.99 tons/year limit based on records of the amount of catalyst added to the incinerator and the amount of catalyst attrition based on a mass balance approach. The Department also determines that BPT does not require additional PM emissions testing as a license condition. However, the Department retains the ability to require additional PM emissions testing if visible emissions, catalyst attrition rates or other information indicates that the incinerator may not be in compliance with its emissions limits.

E. Facility PM Emissions

Corrected Total Annual Licensed PM Emissions for the Facility

Pollutant	Emissions in Tons/Year						
	<u>#17, #18, #20 and #21 Boilers</u>	<u>Diesels #2 and #4</u>	<u>Tech. Center Boiler</u>	<u>#35 Research Coater Dryer</u>	<u>#20 Coater and Catalytic Incinerator</u>	<u>#2 Coater and 4th Zone Dryer</u>	<u>Total</u>
PM/PM ₁₀	523.0	37.7	0.2	0.4	4.49*	0.7	566.49

*** note: 3.99 TPY of the 4.49 TPY is directly from the catalytic incinerator, the remaining 0.5 TPY is from the #20 Coater when it is operating on coated paper grades that do not require operation of the catalytic incinerator**

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ORDER

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

- will receive Best Practical Treatment;
- will not violate applicable emissions standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources

The Department hereby grants Air Emission License Minor Revision A-29-77-1-M subject to the following special conditions:

The following will replace Condition (25) J of Air Emission License A-29-70-A-I, as amended in Air Emission License Amendment #2 (A-29-70-C-A):

- (1) Emissions from the #20 Coater catalytic incinerator shall not exceed the following limits:

Pollutant	lb/hr	Origin and Authority
PM	4.0	MEDEP Chapter 140, BPT
PM ₁₀	4.0	MEDEP Chapter 140, BPT
SO ₂	0.006	MEDEP Chapter 140, BPT
NO _x	1.0	MEDEP Chapter 140, BPT
CO	1.8	MEDEP Chapter 140, BPT

[Enforceable by State-only]

The following will replace Condition (25) N of Air Emission License A-29-70-A-I, as amended in Air Emission License Amendment #1 (A-29-70-B-A):

- (2) To demonstrate compliance with PM emissions restrictions in paragraph (Q), S.D. Warren shall be required to maintain an operations log, recording the date and duration of operation of the incinerator, the coating being utilized on #20 Coater at the time of operation, and the amount of catalyst added to and removed from the incinerator. Compliance with the annual PM emission limit shall be based on the amount of catalyst attrition in that time period determined using a mass balance approach. Records demonstrating compliance with the annual PM emission limit under this paragraph shall be maintained in accordance with Standard Condition (6) of Air Emission License A-29-70-A-I.

[Enforceable by State-only]

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The following shall be a new condition and will be added as Condition (25) Q to Air Emission License A-29-70-A-I:

- (3) Annual PM emissions from the #20 Coater catalytic incinerator shall be restricted to no greater than 3.99 tons per year (ton/yr), on a calendar year basis. [MEDEP Chapter 140, BPT]

[Enforceable by State-only]

Condition (25) L, as established in Air Emission License Amendment #2 (A-29-70-C-A) will be deleted in Air Emission License A-29-70-A-I and will be no longer in effect.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
 DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: **December 4, 2006**

Date of application acceptance: **December 5, 2006**

Date filed with the Board of Environmental Protection _____

This Order prepared by Eric Kennedy, Bureau of Air Quality.