



DEPARTMENT OF ENVIRONMENTAL PROTECTION

ANGUS S. KING, JR.
GOVERNOR

EDWARD O. SULLIVAN
COMMISSIONER

S.D. Warren Paper Co.)	Departmental
Cumberland County)	Finding of Fact and Order
Westbrook, Maine)	Air Emission License
A-29-71-Z-M)	Minor Revision/Amendment #14

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

I. REGISTRATION

S.D. Warren Paper Company, Inc. (SDW), located in Westbrook, has submitted a letter stating the facility is following the provisions of Chapter 134 - Reasonable Available Control Technology (RACT) for facilities that emit volatile organic compounds (VOC) as described in Section 3(A)(4), Option D: RACT control for pulp and paper processes. This minor revision summarizes the Chapter 134 requirements applicable to the SDW mill.

II. REVISION DESCRIPTION

SDW operates the following sources which are eligible to achieve compliance with VOC RACT pursuant to Chapter 134, Option (D) of Section 3(A), as described below:

- a. Bleach Plant
- b. Waste Water Treatment Plant
- c. Pulp Stock Washers and Pulp Liquor Storage Tanks
- d. Digester System, Multiple Effect Evaporator System, Smelt Tank, and Lime Kiln

Bleach Plant

SDW is required, pursuant to Chapter 122, to collect emissions from the Bleach Plant and have the chorine and chlorine dioxide emissions controlled by the Bleach Plant Scrubber System. Bleach plant emissions are controlled with a Caldwell Makay 9 foot diameter, 62.5 foot high packed tower gas absorber. Bleach production plant emissions are controlled by means of a 2 foot diameter 35 foot high packed tower gas absorber. SDW's chlorine and chlorine dioxide emissions are each limited to 3.0 lb/hr after control by the packed towers. As a result of this control requirement, some of the VOC emissions from the Bleach Plant are also

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AUGUSTA
STATE HOUSE STATION 17
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
OFFICE LOCATED AT: RAY BUILDING, HOSPITAL STREET

PORTLAND
312 CANCO ROAD
PORTLAND, ME 04103
(207) 822-6300 FAX: (207) 822-6303

BANGOR
108 HOGAN ROAD
BANGOR, ME 04401
(207) 941-4570 FAX: (207) 941-4584

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, ME 04769
(207) 764-0477 FAX: (207) 764-1507

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collected and controlled by the bleach plant scrubber system. Also, SDW will be evaluating the elimination of sodium hypochlorite as a primary bleaching agent. SDW will submit the results of the study to the Department by June 1, 1996.

The control of emissions from the Bleach Plant by the packed tower gas absorbers pursuant to Chapter 122 (for the control of chlorine and chlorine dioxide emissions) and the engineering study for the elimination of sodium hypochlorite in the future as a primary bleaching stage are determined by the Department to meet VOC RACT. The Department has determined that additional VOC controls for the bleach plant are not feasible.

Waste Water Treatment Facility

The waste water treatment plant air emissions are controlled by means of a conventional activated sludge system. SDW is required by Federal regulation to comply with their National Pollution Discharge Elimination System (NPDES) permit. By complying with their NPDES permit, VOC emissions from SDW's waste water treatment facility are controlled and thus SDW is determined to be meeting VOC RACT.

Pulp Stock Washers and Pulp Liquor Storage Tanks

The Paper Industry Information Office performed a VOC RACT analysis on various VOC sources from a representative paper mill in Maine. From that analysis it was determined that the control of VOCs from the pulping area (which contain pulp stock washers) and the chemical recovery area (which contain pulp liquor storage tanks) would have a \$17,402/ton and \$29,089/ton cost effectiveness, respectively. Based on the economic impact, the control of VOCs from these sources is therefore rejected as RACT. VOC emissions from the Pulp Stock Washer Systems and Pulp Liquor Storage Tanks as currently configured are determined to be meeting VOC RACT and the Department has determined that additional VOC controls are not feasible at this time.

Digester System and the Multiple Effect Evaporator System

SDW is required by Chapter 124 to collect emissions from the Digester System and the Multiple Effect Evaporator System. The total reduced sulfur (TRS) emissions from these sources are to be collected and incinerated within the Lime

Kiln or with Boiler #19 as backup. As a result, VOC emissions from the Digester System and the Multiple Effect Evaporator System are controlled through incineration.

The control of VOC emissions from the Digester system and the Multiple Effect Evaporator System by the lime kiln or Boiler #19 which complies with Chapter 124 for the control of TRS emissions is therefore determined to be meeting VOC RACT. The Department has determined that additional VOC control from the Digester System and the Multiple Effect Evaporator System are not feasible.

Smelt Tank

SDW is required by Chapter 124 to meet a TRS emissions limit of 0.016 g/kg black liquor solids as H₂S (0.033 lb/ton black liquor solids as H₂S) and has a current license limit of 0.0168 lb/ton black liquor solids. In addition, the particulate emissions from this source are required by the license to be controlled by a Ducon UW-4 dynamic wet scrubber. The wet scrubber incorporates a three stage scrubbing system using a spray shower stage followed by a wetted fan and cyclonic entrainment separator. As a result of the scrubber system, some of the VOC emissions from the smelt tank are also controlled. The control of emissions from the smelt tank by the wet scrubber system, operated to meet the license limit for particulate matter and TRS, is also determined to be meeting VOC RACT. The Department has determined that additional VOC controls for the smelt tank are not feasible at this time.

Lime Kiln

Emissions from SDW's lime kiln are controlled by means of an Ahlstrom high efficiency venturi scrubber followed by a cyclonic separator. SDW is required to maintain adequate combustion conditions within the Lime Kiln to meet a TRS emissions limit of 20 ppmv corrected to 10% O₂ on a dry basis, as required by Chapter 124. As a result, VOC emissions from the lime kiln are also controlled by maintaining adequate combustion conditions.

The control of VOC emissions from the Lime Kiln by maintaining adequate combustion conditions, which complies with Chapter 124 for the control of TRS emissions, is therefore determined to be meeting VOC RACT. The Department has determined that additional VOC controls for the Lime Kiln are not feasible at this time.

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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, and~~
- ~~will not violate applicable ambient air quality standards, or increment standards either alone or in conjunction with emissions from other sources.~~

Therefore the Department grants this amendment A-29-71-Z-M, ~~subject to the conditions found in air emission license A 29 71 C A/R, subsequent amendments, in~~ addition to the following conditions:

- (1) SDW shall meet the following VOC RACT requirements:
 - a. SDW shall operate the bleach plant scrubber when the bleach plant is in operation. SDW shall conduct an engineering study to explore alternatives for the removal of sodium hypochlorite as a primary bleaching agent and submit results of the study to the Department by June 1, 1996.
 - b. SDW shall comply with the terms and conditions of the facility's NPDES permit.
 - c. SDW shall collect and control emissions from the digester system and the multiple effect evaporator system for TRS control as required by Chapter 124 of the Department's regulations.
 - d. SDW shall operate the smelt tank scrubber when the smelt tank is in operation and shall not exceed the emission limits set forth in Chapter 124 of the Department's regulation from the smelt tank.
 - e. SDW shall meet a TRS emissions limit of 20.0 ppmv corrected to 10% O₂ on a dry basis, as required by Chapter 124 of the Department's regulations from the lime kiln.

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(2) The term of this order shall be concurrent with the term of air emission license #A-29-71-C-A/R

DONE AND DATED IN AUGUSTA, MAINE THIS 18th DAY OF December 1995.

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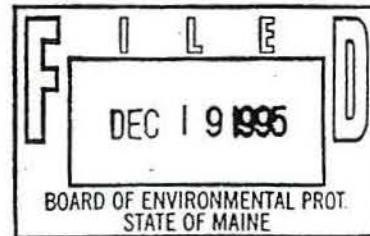
BY: James P. Brooks for J
Edward O. Sullivan, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 1, 1995

Date of application acceptance: June 1, 1995

Date filed with Board of Environmental Protection: _____



This order prepared by Edwin L. Cousins, Bureau of Air Quality