



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

**Red Shield Acquisition LLC
Penobscot County
Old Town, Maine
A-180-70-C-A**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License
Amendment #2**

After review of the 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	Red Shield Acquisition, LLC (Red Shield)
License Number	A-180-70-C-A
License Type	Part 70 Minor Modification
NAICS Code	322110 Wood Pulp Mfg 221119 Electric Power Generation
Nature of Business	Pulp and Paper Manufacturing
Facility Location	Old Town, Maine
Date of Initial License Issuance	December 2, 2009
Date of Amendment Issuance	November 29, 2011
License Expiration Date	December 2, 2014

Red Shield submitted a Part 70 amendment application to incorporate air emission license amendment A-180-77-2-A into the Part 70 license. A-180-77-2-A allows the firing of natural gas in the #4 Recovery Boiler and was issued on January 29, 2010 under the New Source Review process in *Minor and Major Source Air Emission License Regulations* 06-096 CMR 115 (as amended).

Red Shield submitted the Part 70 amendment application within 12 months of the commencement of firing natural gas in the #4 Recovery Boiler.

B. Emission Equipment

This amendment addresses the #4 Recovery Boiler allowable fuels in the Part 70 license. The capacity of the #4 Recovery Boiler is 2.57 MM lb/day firing black liquor solids and 375 MMBtu/hr firing #6 fuel oil, #2 fuel oil, and/or diesel fuel. The controls on the #4 Recovery Boiler include an electrostatic precipitator.

C. Application Classification

The application for the addition of natural gas to the #4 Recovery Boiler does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing or recordkeeping.

The incorporation of the additional fuel into the Part 70 license is classified as a minor modification. The application has been processed under *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (as amended).

II. BEST PRACTICAL TREATMENT (BPT)

A. Natural Gas in the #4 Recovery Boiler

The Department approves the incorporation of the new source review requirements of A-180-77-2-A into the Part 70 license for firing natural gas in the #4 Recovery Boiler. The current license requirements in Air Emission License A-180-70-A-I will continue to apply, including: recordkeeping of the type and amount of fuel consumed; operation of continuous emission monitors for SO₂, NO_x, O₂, CO, and TRS; operation of a continuous opacity monitor; and a heat input limit of 551,868,945,768 Btu/yr from auxiliary fuel. The lb/hr short term limits listed for the fuel oil (non-black liquor firing) shall also apply when firing natural gas.

B. Annual Emissions

No licensed emissions increases are occurring as a result of this amendment.

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 the Part 70 License A-180-70-C-A pursuant to 06-096 CMR 140 and the pre-construction permitting requirements of 06-096 CMR 115; and subject air emission license A-180-70-A-I, amendment A-180-70-B-A, and the conditions below.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 CMR 115 for making such changes and pursuant to the applicable requirements in 06-096 CMR 140.

For each standard and special condition that is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

SPECIAL CONDITIONS

The following shall replace condition (22) in air emission license A-180-70-A-I:

(22) #4 Recovery Boiler

- A. Red Shield is licensed to operate #4 Recovery Boiler and may fire black liquor, #6 fuel oil, diesel fuel, #2 fuel oil, and/or natural gas. The #4 Recovery Boiler shall be limited to firing 2.57 MMLb/day of black liquor solids (on a 24 hour average) as fired. Compliance with the lb/day black liquor solids limit shall be documented through fuel flow meter records. [06-096 CMR 140, BPT] **Enforceable by State-only**
- B. Natural gas, #6 fuel oil, #2 fuel oil, or diesel fuel may be fired alone in the #4 Recovery Boiler to generate steam for a total heat input not to exceed 375 MMBtu/hr, demonstrated by fuel flow meter records and the heat contents of the fuel(s). The sulfur content of the #6 fuel oil, diesel fuel, or #2 fuel oil shall not exceed 0.5% by weight. Records shall be maintained from the fuel supplier documenting sulfur content. The #4 Recovery Boiler shall be limited to firing up to 551,868,945,768 Btu/year from fuel oil or natural gas based on a 12 month rolling total basis in addition to black liquor. Red Shield shall maintain records of monthly and 12 month rolling total Btu use by the quantity, type of fuel consumed, and the heat content of the fuel(s). [06-096 CMR 140, BPT, A-180-71-AV-M, 2008, and A-180-77-2-A, 2010]. **Enforceable by State-only**
- C. Emissions from the #4 Recovery Boiler shall not exceed the following limits, based on firing 2.57 MMLb/black liquor solids per day as fired, when firing black liquor:

Pollutant	gr/DSCF	ppm	Ave Time	Compliance Method	Origin and Authority
PM	0.028 corrected to 8% O ₂	-	-	Stack Test (every other calendar year)	40 CFR Part 63, Subpart MM alternative
SO ₂	-	100.0 *** dry basis 8% O ₂	24 Hr Block Average	CEM data	06-096 CMR 140,BPT
NO _x	-	150.0 * dry basis 8% O ₂	24 Hr Block Average	CEM data	06-096 CMR 138, NO _x RACT
CO	-	500.0 *** dry basis 8% O ₂	24 Hr Block Average	CEM data	06-096 CMR 140,BPT
TRS	-	5.0 ** dry basis, corrected to 8% O ₂	12 Hr Block Average	CEM data	06-096 CMR 124, TRS

* Per 06-096 CMR 138, Section 3(O), periods of start-up, shutdown, malfunction, and fuel switching are not included in determining 24-hour block averages.

** Per 06-096 CMR 124, Section 5(C)(3)(a), the first two 12-hour block averages in a quarter which exceed the 5.0 ppm TRS limit are not considered violations of 06-096 CMR 124.

*** **Enforceable by State-only**

Pollutant	lb/hr	Compliance Method
PM	34.3	Stack Test (upon request)
PM ₁₀	34.3	Stack Test (upon request)
SO ₂	143.0	Stack Test (upon request)
NO _x	154.4	Stack Test (upon request)
CO	312.7	Stack Test (upon request)
VOC	17.9	Stack Test (upon request)
TRS	5.4	Stack Test (upon request)

[06-096 CMR 140, BPT]

lb/hr limits **Enforceable by State-only**

D. Emissions from the #4 Recovery Boiler shall not exceed the following limits when firing auxiliary non-black liquor solids fuel (fuel oil or natural gas):

Pollutant	lb/hr	Compliance Method
PM	37.4	Stack Test (upon request)
PM ₁₀	37.4	Stack Test (upon request)
SO ₂	196.5	Stack Test (upon request)
NO _x	188.2	Stack Test (upon request)
CO	312.7	Stack Test (upon request)
VOC	19.4	Stack Test (upon request)

[06-096 CMR 140, BPT and A-180-77-2-A, 2010] **Enforceable by State-only**

E. Opacity

1. Red Shield shall operate the #4 Recovery Boiler such that the visible emissions from the stack do not exceed 20% opacity on a 6 minute block average basis for 98 percent of all 6 minute block averages on a quarterly basis and 99 percent of all 6 minute block averages on a four consecutive quarter basis. Periods of start-up, shutdown, and malfunctions are included for the purpose of calculating 6 minute block averages over 20%.
2. Red Shield shall implement corrective action, as specified in the start-up, shutdown, and malfunction plan prepared for the #4 Recovery Boiler under 40 CFR Part 63, Subpart MM, §63.866(a) when the average of 10 consecutive 6 minute block averages results in a measurement greater than 20% opacity.

[06-096 CMR 101]

- F. Red Shield shall continue to operate the electrostatic precipitator (ESP) on emissions from the #4 Recovery Boiler. [06-096 CMR 140, BPT]
- G. Red Shield shall operate, at a minimum, the number of ESP fields for which compliance with its licensed particulate matter limits has been demonstrated. Upon written notification to the Department, and in accordance with the Bureau of Air Quality Air Emission Compliance Test Protocol, Red Shield may perform additional particulate emission testing to determine compliance with alternative operating scenarios, but under no circumstances shall Red Shield be relieved of its obligation to meet its licensed emission limits. [06-096 CMR 140, BPT]
- H. Red Shield shall operate and maintain SO₂ (ppm), NO_x (ppm) and O₂ (ppm), CO (ppm), and TRS (ppm) CEMs and a continuous opacity monitor on the #4 Recovery Boiler in accordance with 06-096 CMR 117 and 40 CFR, Part 63, Subpart MM, §63.864(d). [06-096 CMR 117]

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- I. Red Shield shall operate the periodic monitor to record the following for the #4 Recovery Boiler:

	Record
Black Liquor Solids Fired	Continuously

[06-096 CMR 140, BPT] **Enforceable by State-only**

- J. Red Shield is subject to and shall comply with the applicable requirements of 40 CFR Part 63, Subpart A and Subpart MM for the #4 Recovery Boiler. [40 CFR Part 63, Subpart MM]

DONE AND DATED IN AUGUSTA, MAINE THIS 29th DAY OF November, 2011.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie [Signature]
PATRICIA H. AHO, COMMISSIONER

The term of this license shall be concurrent with the term of air emission license A-180-70-A-I.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 1, 2010

Date of application acceptance: September 2, 2010

Date filed with the Board of Environmental Protection _____

This Order prepared by Kathleen E. Tarbuck, Bureau of Air Quality.

