

Appendix 9M

Emission Limits – Excerpts from ROP for New Page Paper Company

**EU #8 Boiler System
EMISSION UNIT CONDITIONS**

DESCRIPTION: The #8 Boiler (EG8B13) is a Combustion Engineering boiler rated for 450,000 pounds of steam per hour (approximately 594 million BTU per hour heat input) that provides steam for mill processes and steam turbine-generator sets for producing electricity. A Flu Gas Recirculation system was installed on the # 8 Boiler. The #8 Boiler burns natural gas and fuel oil

POLLUTION CONTROL EQUIPMENT NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Underlying Applicable Requirements
1. NOx	The Permittee shall comply with the appropriate NOx emission limitations averaged over the ozone control season.	(R336.1801)¹
	a. The emission limitation when firing gas is 0.20 lbs/MMBtu.	(R336.1801(13))¹
	b. The emission limitation when firing residual oil is 0.40 lbs/MMBtu.	(R336.1801(13))¹
	The ozone control period is May 1 through September 30.	(R336.1801(1)(f))¹

II. MATERIAL LIMIT(S)

Material	Limit	Underlying Applicable Requirements
1. Fuel Oil	The fuel oil burned in #8 Boiler shall not exceed a maximum sulfur content of 1.0 percent by weight, calculated on the basis of 18,000 BTU per pound.	(R336.1201, R336.1401)

III. PROCESS/OPERATIONAL RESTRICTION(S): NA

IV. DESIGN/EQUIPMENT PARAMETER(S): NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- The permittee shall measure NOx emissions using a NOx CEMS during the ozone control period in accordance with the provisions of R336.1801(11). **(R336.1801(8))¹**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- The permittee shall obtain and keep records of the sulfur and BTU content of the fuel oil burned in #8 Boiler. For each shipment received, the permittee shall obtain from the supplier a laboratory analysis of the fuel oil sulfur and BTU content. The permittee shall also record the date received, fuel oil grade, source of fuel oil and

<p>EU #9 Boiler System EMISSION UNIT CONDITIONS</p>
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DESCRIPTION: The # 9 Boiler (EU9B03) is a Babcock & Wilcox boiler rated for 250,000 pounds of steam per hour (approximately 360 million BTU per hour heat input) that provides steam for mill processes and steam turbine-generators for producing electricity. The # 9 boiler burns primarily wood residue, but may also burn natural gas, and paper cores. The boiler system has two emission units, the #9 Boiler and Wood Residue Surge Bin.

POLLUTION CONTROL EQUIPMENT: Multiclone and two wet scrubbers on the # 9 boiler exhaust; Cyclone dust collector on Wood Residue Surge Bin.

Flexible Grouping ID: FGRMPMOD

I. EMISSION LIMIT(S)

Pollutant	Limit	Underlying Applicable Requirements
1. NOx	The permittee shall comply with applicable oxides of nitrogen emission limits for the # 9 boiler, as specified in Table 81 of Rule 801, during years when the boiler meets the definition of a fossil fuel fired emission unit per the definition in R336.1801(1)(b).	(R336.1801) ¹
2. Particulate	If the wood residue heat input to # 9 boiler is greater than 75 percent of the total heat input to the boiler, the particulate emission from # 9 boiler shall not exceed 0.50 pounds per 1000 pounds of exhaust gases, measured at operating conditions, corrected to 50 percent excess air.	(R336.1201, R336.1331)
3. Particulate	If the wood residue heat input to the # 9 boiler is less than or equal to 75 percent of the total heat input to the boiler, the particulate emission from # 9 boiler shall not exceed the fraction of total heat input from the wood residue times 0.67 pounds per 1000 pounds of exhaust gases, measured at operating conditions, corrected to 50 percent excess air.	(R336.1201, R336.1331)
4. Particulate	The particulate emission from the cyclone dust collector serving the wood residue surge bin shall not exceed 0.10 pounds per 1000 pounds of exhaust gases, measured at operating conditions.	(R336.1331)

II. MATERIAL LIMIT(S): NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU9B03 while burning wood residue and/or paper cores unless the multiclone dust collector and two wet scrubbers are operating properly. **(R336.1201, R336.1910)**
2. The permittee shall immediately cease wood residue input feed to EU9B03, consistent with safe operating procedures, upon initiation of scrubber bypass. During a scrubber bypass, the permittee shall burn only natural gas in EU9B03. Wood residue fuel input shall not be restarted until the scrubber is back on line and functioning properly. **(R336.1201, R336.1331, R336.1910)**

EU Chemical Recovery Furnace System EMISSION UNIT CONDITIONS

DESCRIPTION: The **Chemical Recovery Furnace System** is used to regenerate chemicals used in the kraft process. The #10 Recovery Furnace is rated for 565,000 pounds of steam per hour (approximately 950 million BTU per hour heat input), and burns black liquor, natural gas, #6 fuel oil, and used oil. Also, the #10 Recovery Furnace receives and incinerates HVLC noncondensable gases from the Digester System, Brownstock System, Evaporator System, and Chemical Recovery Furnace System. The Chemical Recovery Furnace System has one emitting units: #10 Recovery Furnace (EURF15).

POLLUTION CONTROL EQUIPMENT: Electrostatic precipitator on #10 Recovery Furnace.

I. EMISSION LIMIT(S)

Pollutant	Limit	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Arsenic	The arsenic emission from EURF15 while burning used oil and/or # 6 fuel oil shall not exceed 0.004 milligrams per cubic meter, corrected to 70 degrees Fahrenheit and 29.92 inches Hg.		(R336.1901) ¹
2. Cadmium	The cadmium emission from EURF15 while burning used oil and/or #6 fuel oil shall not exceed 0.038 milligrams per cubic meter, corrected to 70 degrees Fahrenheit and 29.92 inches Hg.		(R336.1901) ¹
3. Carbon Monoxide	The carbon monoxide emission from EURF15 shall not exceed 2000 parts per million by volume nor 1424 pounds per hour, based upon a one-hour average.		(R336.1201, 40 CFR 52.21)
4. Carbon Monoxide	The carbon monoxide emission from EURF15 shall not exceed 800 parts per million by volume nor 570 pounds per hour, based upon an eight-hour average.		(R336.1201, 40 CFR 52.21)
5. Chromium	The chromium emission from EURF15 while burning used oil and/or #6 fuel oil shall not exceed 0.016 milligrams per cubic meter, corrected to 70 degrees Fahrenheit and 29.92 inches Hg.		(R336.1901) ¹

Pollutant	Limit	Monitoring/ Testing Method	Underlying Applicable Requirements
6. HAP Metals measured as Particulate Matter (PM)	<p>The permittee shall comply with the emission limits specified in one of the following options as provided in 40 CFR 63 Subpart MM:</p> <p>a. The Particulate Matter (PM) concentration in the # 10 Recovery Furnace exhaust gases shall not exceed 0.044 grain per dry standard cubic foot corrected to 8 percent oxygen;</p> <p>OR</p> <p>b. Alternative Particulate Matter (PM) emission limits established for each existing recovery furnace, smelt dissolving tank, and lime kiln that operates 6,300 hours per year or more as provided under 40 CFR 63.862(a)(1)(ii), subject to the limitations specified.</p>		<p>(40 CFR 63.861)</p> <p>(40 CFR 63.862 (a)(1)(i)(A), 40 CFR 63.865(b))</p> <p>(40 CFR 63.862 (a)(1)(ii), 40 CFR 63.865(a), 40 CFR 63.865 (b))</p>
7. Nitrogen Oxides	The nitrogen oxides emission from EURF15 shall not exceed 400 parts per million by volume, nor 468 pounds per hour.		(R336.1201, 40 CFR 52.21)
8. Particulate	<p>The particulate emission from EURF15 shall not exceed 0.033grains per dry standard cubic foot corrected to 8 percent oxygen, nor 60.5 pounds per hour. The permittee may petition the Department for an alternate particulate limit up to, but not exceeding, 0.044 grains per dry standard cubic foot of exhaust gases corrected to 8 percent oxygen. Such alternate particulate emission limit shall not be established by the Department unless the Department is reasonably convinced of all the following:</p> <p>a. All reasonable measures to reduce particulate emissions have been implemented or will be implemented in accordance with a schedule approved by the Department.</p> <p>b. Compliance with the original particulate emission limit is either technically or economically unreasonable.</p> <p>c. The requested alternate particulate limit is the limit that reflects the level of emission that can be reasonably achieved on a consistent basis.</p>		(R336.1201, R336.1331, 40 CFR 52.21)
9. Polychlorinated Biphenyls	The polychlorinated biphenyls emission from EURF15 while burning used oil and/or #6 fuel oil shall not exceed 0.014 milligrams per cubic meter, corrected to 70 degrees Fahrenheit and 29.92 inches Hg.		(R336.1901) ¹
10. Sulfur Dioxide	The sulfur dioxide emission from EURF15 shall not exceed 250 parts per million by volume, nor 407 pounds per hour.		R336.1201, 40 CFR 52.21)
11. Total Reduced Sulfur	The total reduced sulfur emission from EURF15 shall not exceed 5 parts per million based upon a 12-hour average, corrected to 8 percent oxygen, nor 5.6 pounds per hour.		(R336.1201, 40 CFR 52.21, 40 CFR 60.283)

**EU Smelt Dissolving Tank System
EMISSION UNIT CONDITIONS**

DESCRIPTION: The Smelt Dissolving Tank System is used to regenerate chemicals used in the kraft process. The Smelt Dissolving Tank receives smelt from the # 10 Recovery Furnace, which it mixes with weak wash to generate green liquor that is transported to the Recausticizing System. The Smelt Dissolving Tank System has one emitting unit: The Smelt Dissolving Tank (EUST15).

POLLUTION CONTROL EQUIPMENT: Wet scrubber and mist eliminator on Smelt Dissolving Tank.

I. EMISSION LIMIT(S)

Pollutant	Limit	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate	<p>a. The Particulate Matter (PM) concentration in the Smelt Dissolving Tank exhaust gases shall not exceed 0.20 pounds per ton of black liquor solids fired.</p> <p>b. Alternate Particulate Matter (PM) emission limits may be established for each existing smelt dissolving tank that operates 6,300 hours per year or more as provided under 40 CFR 63.862(a)(1)(ii), subject to limitations specified.</p> <p>c. The Particulate emission from the Smelt Dissolving Tank shall not exceed 0.15 lbs/1000 lbs of exhaust gases, calculated on a dry gas basis.</p>		<p>a. (40 CFR 63.862(a)(i)(B), 40 CFR 63.865(b))</p> <p>b. (40 CFR 63.862(a)(1)(ii), 40 CFR 63.865(a), 40 CFR 63.865(b))</p> <p>c. (R336.1201, R336.1331, 40 CFR 52.21)</p>
2. Total Reduced Sulfur (TRS)	The total reduced sulfur emission from the Smelt Dissolving Tank shall not exceed 0.0084 grams per kilogram of black liquor solids based upon a 12 hour average.		(R336.1201, 40 CFR 52.21)

II. MATERIAL LIMIT(S): NA

III. PROCESS/OPERATIONAL RESTRICTION(S): NA

IV. DESIGN/EQUIPMENT PARAMETER(S): NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall test for particulate and total reduced sulfur emissions from the Smelt Dissolving Tank once every three years from the date of issuance of this permit. Test results shall be submitted in an acceptable manner within 60 days of completion of the test. (R336.1201, R336.1213(3))

2. Performance tests shall be conducted according to procedures and test methods specified or approved by the Air Quality Division. Not less than 30 days prior to testing, a test plan shall be submitted to the AQD for review and approval. **(R336.2001, R336.2003)**

See Appendix 5

**EU Lime Kiln System
EMISSION UNIT CONDITIONS**

DESCRIPTION: The Lime Kiln System (EULK29) includes the Lime Kiln and two Lime Storage Bins, one for hot lime storage, one for purchased lime storage. The Lime Kiln is fired with natural gas and/or fuel oil. Also, the Lime Kiln is a backup incineration device for the Thermal Oxidizer System

POLLUTION CONTROL EQUIPMENT: Venturi scrubber and mist eliminator on EULK29. A common baghouse dust collector serves the two Lime Storage Bins.

I. EMISSION LIMIT(S)

Pollutant	Limit	Monitoring/ Testing Method	Underlying Applicable Requirements
1. HAP Metals measured as Particulate Matter (PM)	<p>Pursuant to 40 CFR 63 Subpart MM, the permittee shall comply with the emission limits specified in one of the following options:</p> <p>a. The Particulate Matter (PM) concentration for EULK29 exhaust gases shall not exceed (0.064 grains per dry standard cubic foot) corrected to 10 percent oxygen based on a 3 hour averaging time at all times except during a SSM and as specified in 40 CFR 63.443(e), 40 CFR 36.446(g) and 40 CFR 63.864(k)(2). or</p> <p>b. Alternative Particulate Matter (PM) emission limits established for each existing recovery furnace, EUST15, and EULK29 that operates 6,300 hours per year or more as provided under 40 CFR 63.862(a)(1)(ii), subject to the limitations specified.</p>		<p>(40 CFR 63.861)</p> <p>(40 CFR 63.6(f), 63.862(a)(1)(i)(c))</p> <p>(40 CFR 63.862(a)(1)(ii), 40 CFR 63.865(a), 40 CFR 63.865(b))</p>
2. Particulate	The particulate emission from EULK29 shall not exceed 0.20 pounds per 1000 pounds of exhaust gases measured at operating conditions.		(R336.1201, R336.1331)
3. Particulate	The particulate emission from the two Lime Storage Bins shall not exceed 0.10 pounds per 1000 pounds of exhaust gas, measured at operating conditions.		(R336.1331)
4. Sulfur Dioxide	The sulfur dioxide emission from EULK29 shall not exceed 9 pounds per hour.		(R336.1201)
5. Total Reduced Sulfur	The TRS concentration from EULK29 exhaust gases shall not exceed 20 parts per million by volume, based on a twelve hour average, corrected to 10 percent oxygen.		(R336.1201)