RockTenn CP, LLC
Panama City Mill
Facility ID No.: 0050009
Bay County

Title V Air Operation Permit Revision

Permit No.: 0050009-035-AV
Revision to Title V Air Operation Permit No.: 0050009-032-AV

Permitting and Compliance Authority:
Florida Department of Environmental Protection
Northwest District Air Program
160 W Government Street, Suite 308
Pensacola FL 32502-5740

Telephone: 850.595.8300
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Florida Department of Environmental Protection

Northwest District
160 W. Government Street, Suite 308
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Rick Scott
Governor

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Secretary

Permittee:
RockTenn CP, LLC
One Everitt Avenue
Panama City, Florida 32402

Permit No.: 0050009-035-AV
Facility ID No.: 0050009
SIC No(s).: 2611, 2621
Project: Title V Air Operation Permit Revision

This permit revision is being issued for the purpose of incorporating the terms and conditions of air construction permit 0050009-034-AC, which sets a Wood Yard limit at 3,471,534 tons of round wood and purchased wood chips per year at the Panama City Mill. This facility is located at One Everitt Avenue in Panama City, Bay County; UTM coordinates are Zone 16, 632.8 km East, and 3335.1 km North; and, Latitude: 30° 08' 30" North and Longitude: 85° 37' 25" West.

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix SS-1, STACK SAMPLING FACILITIES version dated 10/07/96
Appendix TV-6, TITLE V CONDITIONS version dated 6/23/06
Appendix U-1, List of Unregulated Emissions Units and/or Activities
TABLE 297.310-1, CALIBRATION SCHEDULE version dated 10/07/96
TRS Contingency Plan
Appendix CAM Conditions
Appendix CAM Plan
Startup, Shutdown Malfunction (SSM) Plan
Attachment SSCE-FIC3 - Precautions to Prevent Unconfined Emissions
40 CFR 60 Subpart A
40 CFR 60 Subpart BB
40 CFR 63 Subpart A
40 CFR 63 Subpart MM
40 CFR 63 Subpart RR
40 CFR 63 Subpart S

Initial Effective Date: October 18, 2010
Revision Effective Date: March 14, 2013
Renewal Application Due Date: March 7, 2015
Expiration Date: October 18, 2015

_____/s/_____
J. Charles Harp
Program Administrator
Waste Management/Air Resources

Section I. Facility Information

The purpose of this permit is to revise Title V Air Operation permit 0050009-032-AV, effective October 18, 2010, by incorporating the terms and conditions of permit 0050009-034-AC, issued January 27, 2012.

Subsection A. Facility Description

This facility is a Kraft pulp and paper mill that consists of major activities areas such as: wood handling, pulping, bleaching, chemical recovery, power house, paper machines, and associated processes and equipment. Wood is ground into chips and the chips digested in a caustic solution to break down the lignin binding the cellulosic wood fibers. The wood fibers are washed, bleached and formed into paper or linerboard.

No. 3 Combination Boiler
This boiler has a maximum heat input of 505 MMBtu/hr and burns wood, bark, primary clarified wood fibers, secondary solids (residuals) from the aerated stabilization basin, natural gas and/or No. 2 fuel oil or No. 6 fuel oil. This boiler serves as a control device for the condensate stripper off-gases (SOG). Particulate matter (PM) emissions are controlled by a fly ash arrestor manufactured by Process Equipment, model AR56UACB-8-7, followed by a wet scrubber manufactured by FMC Link-Belt, model 200K dual-throat. Sulfur dioxide (SO_2) emissions are controlled by limiting the sulfur content of fuel oil to a maximum of 2.4% by weight and are monitored by a SO_2 CEMS. Hazardous air pollutants (HAP) and total reduced sulfur (TRS) emissions are controlled by injecting the gases into the boiler in the flame zone, with the primary fuel, or with the combustion air. This boiler also serves as a backup control device to the Lime Kiln (EU 004) for the condensate SOG and the non-condensable gases (NCG) from the Multiple-Effect Evaporator (MEE) System and from the Batch Digester System (BDS). This boiler is regulated by Rule 62-296.410, F.A.C., Carbonaceous Fuel Burning Equipment, Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

No. 4 Combination Boiler
This boiler has a maximum heat input of 545 MMBtu/hr and burns wood, bark, primary clarified wood fibers, secondary solids (residuals) from the aerated stabilization basin, coal, natural gas and/or No. 2 fuel oil or No. 6 fuel oil. This boiler serves as a control device for the condensate SOG. PM emissions are controlled by a fly ash arrestor manufactured by Process Equipment, model AR56UACB-8-7, followed by a wet scrubber manufactured by FMC Link-Belt, model 200K dual-throat. The No. 4 Combination Boiler is also the backup control device for the NCG from the MEE System and from the BDS. HAP and TRS emissions are controlled by injecting the gases into the boiler in the flame zone, with the primary fuel, or with the combustion air. This boiler is regulated by Rule 62-296.410, F.A.C., Carbonaceous Fuel Burning Equipment, Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

Nos. 1 and 2 Recovery Boilers
Each recovery boiler is a direct contact recovery boiler with an electrostatic precipitator for PM control. Each recovery boiler has a maximum heat input of 721 MMBtu/hr, which is equivalent to 123,700 pounds per hour of black liquor solids assuming 5,830 Btu/lb of black liquor solids. Black liquor, either purchased or generated by the pulping process and containing between 5,200 and 6,300 Btu/lb, is normally used for fuel but natural gas or No. 2 fuel oil or No. 6 fuel oil with

a maximum of 2.5% sulfur by weight may be used as a backup or supplemental fuel. Each boiler has an electrostatic precipitator that controls PM emissions. TRS emissions are monitored with a CEMS. The recovery boilers are regulated by Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources.

Nos. 1 and 2 Smelt Dissolving Tanks

The operating rate of each smelt dissolving tank is equal to the maximum allowed operating rate of each recovery boiler, which is 123,700 pounds per hour of black liquor solids. The smelt is dissolved in weak wash to yield green liquor. PM emissions are controlled by venturi scrubbers. TRS emissions are controlled by the use of weak wash as the scrubber media. The weak wash scrubber flow is monitored as a surrogate compliance parameter. The smelt dissolving tanks are regulated by Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources.

Lime Kiln

The Lime Kiln is used to produce quicklime for making white liquor. It utilizes petcoke with up to 8.0% sulfur by weight as a primary fuel blended with No. 2 fuel oil or No. 6 fuel oil with a maximum of 2.4% sulfur by weight, and natural gas. The maximum heat input rate for the petcoke burner system is 180 MMBtu per hour. For flame stability, petcoke is co-fired with fuel oil or natural gas and constitutes up to 90% of the maximum heat input rate to the Lime Kiln. The Lime Kiln has a maximum operating rate of 85,000 pounds per hour of lime mud. The Lime Kiln is the primary control device to thermally destroy the NCG from the MEE System and from the BDS. TRS, nitrous oxides (NO_X), SO_2, and PM emissions are controlled by a venturi wet scrubber manufactured by Chemico, followed by a cyclone. SO_2 emissions are monitored with a CEMS. The Lime Kiln is regulated by 40 CFR 64 - CAM plan for SO_2, 40 CFR 60 Subpart BB - Kraft Pulp Mills, and Rule 62-296.404, F.A.C.

Petcoke Handling and Storage

Ground petcoke is delivered to the facility by truck and/or rail car and pneumatically conveyed to a 250-ton ground petcoke storage silo equipped with a baghouse to control PM emissions. The ground petcoke is dropped from the storage silo into a weigh bin then transferred in an enclosed conveyor to the Lime Kiln. A blower and eductor are used to deliver the ground petcoke to the kiln burner. Displaced air from the weigh bin is redirected to the storage silo. The petcoke storage and handling is regulated by Rule 62-296.320, F.A.C., General Pollutant Limiting Standards.

Bleaching System

The Bleaching System has a maximum process capacity of 1,250 tons per day of air dried unbleached pulp (ADUP). The facility has a 40-ton per day chlorine dioxide generator and associated chlorine dioxide storage tank. The bleaching towers have been modified to allow for a 100 percent chlorine dioxide substitution capability to comply with MACT standards. HAP/VOC emissions from the bleach plant are controlled with a wet alkaline scrubber using weak wash or white liquor. A closed vent system is used to collect HAP/VOC emissions from the washers, the towers, and the filtrate tanks where chlorine or chlorinated compounds are used and then, subsequently, treated in the scrubber. The chlorine dioxide storage tank is vented to the chlorine dioxide plant scrubber. The bleaching system is regulated by 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

Multiple Effect Evaporator (MEE) Systems
This emission unit consists of a Pre-Evaporator and the Nos. 1A and 3 Evaporator sets, and associated equipment. The No. 1A Evaporator set and the No. 3 Evaporator set each include 2 four-stage MEE systems and associated condensers, hot wells and concentrators. The evaporators are used to concentrate the weak black liquor prior to firing in the recovery furnaces. The off-gases (TRS/HAP/VOC) from these sources are collected in the low volume high concentration (LVHC) NCG collection system. NCG emissions are controlled by incineration in the Lime Kiln or in the No. 4 Combination Boiler or No. 3 Combination Boiler as backup. The maximum operating rate is 359,400 pounds of dry black liquor solids per hour. The MEE systems are regulated by Rule 62-296.404, F.A.C., 40 CFR 60 Subpart BB - Kraft Pulp Mills, and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

Digester System
The digester system consists of 22 batch digesters, 5 blow tanks, an accumulator tank with both an upstream and a downstream condenser, and a turpentine recovery system (decanter, condenser and storage tank). The off-gases (TRS/HAP/VOC) from these sources are collected in the LVHC NCG collection system. TRS/HAP/VOC emissions are controlled by incineration in the Lime Kiln or in the No. 4 Combination Boiler or No. 3 Combination Boiler as backup. The digester system is regulated by Rule 62-296.404, F.A.C., 40 CFR 60 Subpart BB - Kraft Pulp Mills, and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

Pulping System
The LVHC NCG from the turpentine decanter, the turpentine condenser, the turpentine storage tank, the foul condensate storage tank blow heat recovery, the multiple effect evaporators and the batch digester system are collected and combusted in the Lime Kiln (primary NCG control system) or in the No. 4 Combination Boiler or No. 3 Combination Boiler (back-up NCG control systems). A steam-heated condensate stripper treats the foul condensate streams from a blow heat accumulator tank, a turpentine system, a pre-evaporator, and the NCG system. The stripper system has a design capacity of 500 gallons per minute and consists of the following equipment: a foul condensate storage tank, a fiber filter, a stripper feed pre-heater, a condensate stripper, a primary reflux condenser and a trim condenser. The non-condensed vapors from the reflux condenser are routed to the trim condenser and finally to the No. 3 Combination Boiler or No. 4 Combination Boiler for thermal destruction. The pulping system is regulated by 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry and 40 CFR 63 Subpart RR - NESHAP for Individual Drain Systems.

Lime Slaker
Lime (CaO) from the Lime Kiln is added to green liquor (Na_2CO_3, Na_2S, and Na_2SO_4) in the Lime Slaker to make white liquor (NaOH and Na_2S), a caustic solution used for cooking wood chips. Lime mud is formed as a byproduct that is recovered and regenerated to lime in the Lime Kiln. The maximum operating rate is 81.6 tons per hour of green liquor solids and lime (60.39 tons per hour green liquor and 21.18 tons per hour lime). PM emissions are controlled by a wet walled cyclone scrubber. The lime slaker is regulated by Rules 62-296.404, F.A.C., Kraft Pulp Mills and 62-296.320, F.A.C., General Pollutant Limiting Standards.

Wood Yard. Wood chips are used as the raw material in the papermaking process and scrap wood and bark are used in steam generation. Round wood (whole tree trunks) is received as either short wood or long wood. Purchased hardwood chips or softwood chips are also received. Bark is a byproduct of log processing. Some bark is also purchased. The chipping process begins by passing logs through a debarker to remove bark, which is collected and transferred via

conveyors and hogged to obtain a desired size. After processing, the bark is stored in piles, transferred to the bark bin, and then used as a fuel for boilers at the facility. The logs are then chipped and the chips screened for proper size. Both purchased and manufactured chips are conveyed and stored in chip reclaimer storage piles. The facility has one softwood chip reclaimer storage pile and one hardwood chip reclaimer storage pile. Three cyclones associated with the bark transfer and conveying system are used to pneumatically convey the bark and to control PM emissions. Conveyors are covered and roads are paved and maintained to minimize PM entrainment. Four cyclones are used in the Screening Room to separate fines from the conveying air stream and to control PM emissions. The wood yard is regulated by Rule 62-296.320(4)(b)1 & 4, F.A.C. - General Pollutant Emission Limiting Standards.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received October 5, 2012, this facility is a major source of HAP.

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

EU I.D.	Brief Description
001	No. 1 Recovery Boiler
019	No. 2 Recovery Boiler
015	No. 3 Combination Boiler
016	No. 4 Combination Boiler
021	No. 1 Smelt Dissolving Tank
020	No. 2 Smelt Dissolving Tank
004	Lime Kiln
026	Multiple Effect Evaporator Systems
027	Digester System, Non- Condensable Gas (NCG) Handling System
005	Lime Slaker
030	Wood Yard
033	Bleach Plant with Wet Scrubber
034	Pulping System
038	Petcoke Handling & Storage

Unregulated Emissions Units and/or Activities

EU I.D.	Brief Description
032	Paper Making/Warehousing
035	Brown Stock Washing & Screening
037	Chemical Recovery Area

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

<u>These documents are provided to the permittee for information purposes only:</u>
Appendix A-1: Abbreviations, Acronyms, Citations, and Identification Numbers
Statement of Basis

<u>These documents are on file with the permitting authority:</u>
Appendix H-1: Permit History
Application for a Title V Air Operation Permit Revision received October 5, 2012

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV, TITLE V GENERAL CONDITIONS, is a part of this permit.

2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. [Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).
a. As required by Section 112(r)(7)(B)(iii) of the CAA and 40 CFR 68, the owner or operator shall submit an updated Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.
b. As required under Section 252.941(1)(c), F.S., the owner or operator shall report to the appropriate representative of the Department of Community Affairs (DCA), as established by department rule, within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the United States Environmental Protection Agency under Section 112(r)(6) of the CAA.
c. The owner or operator shall submit the required annual registration fee to the DCA on or before April 1, in accordance with Part IV, Chapter 252, F.S., and Rule 9G-21, F.A.C.

Any required written reports, notifications, certifications, and data required to be sent to the DCA, should be sent to:

Department of Community Affairs
Division of Emergency Management
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
Telephone: 850.413.9921; Fax: 850.488.1739

Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 10162
Fairfax, VA 22038
Telephone: 703.227.7650

Any required reports to be sent to the National Response Center, should be sent to:

National Response Center
EPA Office of Solid Waste and Emergency Response
USEPA (5305 W)
401 M Street, SW
Washington, D.C. 20460
Telephone: 1.800.424.8802

Send the required annual registration fee using approved forms made payable to:

Cashier
Department of Community Affairs
State Emergency Response Commission
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2149

[Part IV, Chapter 252, F.S.; and, Rule 9G-21, F.A.C.]

{Permitting Note: This facility uses 40 tons per day of ClO_2. This is over the threshold quantity for ClO_2 in Table 1 to 40 CFR 68.130 - List of Regulated Toxic Substances and Threshold Quantities for Accidental Release Prevention.}

5. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit. [Rule 62-213.440(1), F.A.C.]

6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit. [Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]

7. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Nothing was deemed necessary and ordered at this time. [Rule 62-296.320(1), F.A.C.]

8. Emissions of Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements:

a. Maintenance of roads, parking areas, and yards.
b. Application of water and other dust suppressants when necessary to control emissions.
c. Removal of particulate matter from roads and other paved areas under control of the owner or operator, and from buildings or work areas to prevent re-entrainment.
d. Protection of dust transfer points and transport and storage containers from wind action which might make dust airborne.
e. Chips from off-site or manufactured on-site will be screened following removal from storage prior to conveying to the digesters.
f. All woodyard conveyor systems shall be covered or enclosed.
g. Drop distance from chip storage stacker shall be maintained at a minimum.
h. All main access roads shall be paved.

[Rule 62-296.320(4)(c)2., F.A.C]

9. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C. [Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C.}

10. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Northwest District Office. Notifications and reports may be submitted by electronic mail to nwdair@dep.state.fl.us.

Department of Environmental Protection
Northwest District Air Program
160 W Government Street, Suite 308
Pensacola, Florida 32502-5740
Telephone: 850.595.8300; Fax: 850.595.8096

11. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404.562.9155; Fax: 404.562.9163

12. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information. [Rule 62-213.420(4), F.A.C.]

13. When appropriate, any recording, monitoring or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one. [Rule 62-213.440, F.A.C.]

14. For PSD evaluation purposes, the facility's maximum pulp production is 781,000 air-dried tons of unbleached pulp per year. Pulp production records shall be maintained and available for inspection by the Department upon request. [Rules 62-4.070(3), 62-4.160(2) and 62-212.400(5), F.A.C.; permit 0050009-005-AC/PSD-FL-288]

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions units.

E.U. ID No.	Brief Description
001	No. 1 Direct Contact Recovery Boiler with an electrostatic precipitator for particulate control. TRS emissions are reduced by a two-stage heavy black liquor oxidation system.
019	No. 2 Direct Contact Recovery Boiler with an electrostatic precipitator for particulate control. TRS emissions are reduced by a two-stage heavy black liquor oxidation system.

Each recovery boiler is a direct contact recovery boiler with an electrostatic precipitator for PM control. TRS is monitored with a CEM. The recovery boilers are regulated by Rule 62-296.404, F.A.C. - Kraft Pulp Mills and 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources. The recovery boilers, combined, have a maximum heat input rate of 721 MMBtu per hour. No. 1 Direct Contact Recovery Boiler (EU 001) started up in 1970 and No. 2 Direct Contact Recovery Boiler (EU 019) started up in 1971.

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum allowable operating rate of each boiler is 123,700 pounds of black liquor solids (dry basis) fired per hour based on a 24-hour average, as measured from the black liquor storage tanks and prior to each recovery boiler. The rate of black liquor solids fired shall be monitored continuously and recorded hourly, and the records made available for Department inspection. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., and permit 0050009-023-AC]
{Permitting Note: The capacity limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability.}

A.2. Methods of Operation - (i.e., Fuels). The primary fuel shall be black liquor solids. Natural gas, No. 2 fuel oil or No. 6 fuel oil with a maximum of 2.5% sulfur by weight, may be used as backup or supplemental fuel. Records of the sulfur content for each shipment of the fuel oil shall be maintained and available for inspection by the Department. On-site blending of fuel oil to achieve the sulfur standard is prohibited. [Rules 62-4.160(2) and 62-213.440(1), F.A.C.]

A.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

A.4. Particulate Matter: PM emissions from each unit shall not exceed 0.044 grain per dry standard cubic foot corrected to 8 percent oxygen. [40 CFR 63.862]

A.5. Visible Emissions: Visible emissions shall not exceed 35% opacity for 6 percent or more of the operating time within any quarterly period. Monitoring requirements and compliance shall be in accordance with 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources. [40 CFR 63.864]

A.6. Total Reduced Sulfur: TRS emissions from each unit shall not exceed 17.5 parts per million by volume on a dry basis at standard conditions corrected to 8% oxygen as a 12-hour average. [Rule 62-296.404(3)(c)1.a, F.A.C.]

Excess Emissions

A.7. Excess Emissions: See Subsection M. Common Conditions, Excess Emissions.

Test Methods and Procedures

A.8. Emissions Tests: See Subsection M. Common Conditions, Test Methods and Procedures.

A.9. Particulate Matter: The test method for particulate matter shall be EPA test method 5, incorporated and adopted by reference in Chapter 62-297.401(5), F.A.C. [Rules 62-296.404(4)(a)2 and 62-297.401(5), F.A.C.]

A.10. Visible Emissions: The test method for visible emissions shall be EPA test method 9, incorporated and adopted by reference in Rule 62-297.401(9)(a), F.A.C. [Rules 62-296.404(4)(a)1 and 62-297.401(9)(a), F.A.C.]

A.11. Total Reduced Sulfur: The test method for total reduced sulfur shall be EPA test method 16, 16A or 16B incorporated and adopted by reference in Rule 62-297.401(16), (16)(a) or (16)(b), F.A.C. Testing is required only upon permit renewal. [Rules 62-296.404(4)(a)3 and 62-297.401(16), (16)(a), or (16)(b), F.A.C.]

Monitoring of Operations

A.12. Determination of Process Variables: See Subsection M. Common Conditions, Determination of Process Variables.

A.13. Startup, Shutdown and Malfunction Plan: Permittee shall comply with all the applicable standards and requirements of 40 CFR 63.6(e) (Operation and Maintenance Requirements), and the facility's Startup, Shutdown and Malfunction Plan attached and incorporated by reference. [40 CFR 63.6(e)]

Continuous Monitoring Requirements

A.14. Total Reduced Sulfur Continuous Monitoring: See Subsection M. Common Conditions, Total Reduced Sulfur Continuous Emissions Monitoring Requirements.

Recordkeeping and Reporting Requirements

A.15. Quarterly Emission Reports: See Subsection M. Common Conditions, Quarterly Reporting Requirements.

Other Requirements

A.16. 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources Requirements: See Subsection M. Common Conditions, 40 CFR 63 Subpart MM - Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills.

Section III. Emissions Unit(s) and Conditions

Subsection B. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
015	No. 3 Combination Boiler

The No. 3 Combination Boiler started up on October 24, 1989, and burns wood, bark, primary clarified wood fibers, secondary solids (residuals) from the aerated stabilization basin, natural gas and/or No. 2 fuel oil or No. 6 fuel oil. The No. 3 Combination Boiler serves as a control device for the condensate SOG and the NCG gases. PM emissions are controlled by a fly ash arrestor, followed by a variable throat venturi wet scrubber. SO_2 emissions are controlled by limiting the sulfur content of the fuel oil to a maximum of 2.4% by weight and monitored by a SO_2 CEMS. TRS and HAP emissions are controlled by injecting the gases into the boiler in the flame zone, with the primary fuel or with the combustion air. This boiler is regulated by Rule 62-296.410, F.A.C. - Carbonaceous Fuel Burning Equipment, Rule 62-296.404, F.A.C. - Kraft Pulp Mills and 40CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

Off-gases from the condensate stripper are transported to the boiler for thermal destruction of TRS/HAP/VOC. The No. 4 Combination Boiler is a backup control device to the No. 3 Combination Boiler for this purpose.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The total maximum operational heat input of this emissions unit is 505 MMBtu per hour based on a 24-hour average. The heat input shall not exceed 378 MMBtu per hour from fuel oil, 474 MMBtu per hour from carbonaceous fuels, or 411 MMBtu per hour from natural gas. The total heat input to the No. 3 Combination Boiler and the No. 4 Combination Boiler due to carbonaceous fuels, shall not exceed 501 MMBtu per hour based on a 24-hour average. This unit is authorized to operate at the following steam production rates:

a. When all boilers at the plant are in operation, the maximum continuous steam rate for the No. 3 Combination Boiler shall not exceed 300,000 pounds per hour (24-hour average).
b. When at least one of the other plant boilers is not in operation, the maximum continuous steam rate for the No. 3 Combination Boiler shall not exceed 330,000 pounds per hour (24-hour average).

Permittee shall install, calibrate, maintain and operate equipment to continuously monitor and record the steam production rate to demonstrate compliance with this requirement. [Rules 62-4.160(2), 62-210.200(PTE), (Source Obligation) 62-212.400(2)(g), and 62-297.310(5), F.A.C., and permits 0050009-013-AC and 0050009-023-AC]
{Permitting Note: The capacity limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability.}

B.2. Methods of Operation - (i.e., Fuels). This emissions unit may burn carbonaceous fuels (includes wood, bark, primary clarified wood fibers, and secondary solids (residuals) from the

aerated stabilization basin), natural gas and No. 2 fuel oil or No. 6 fuel oil (maximum of 2.4% sulfur by weight). Records of the sulfur content for each shipment of the fuel oil shall be maintained and available for inspection by the Department. On-site blending of fuel oil to achieve the sulfur standard is prohibited. [Rules 62-4.160(2) and 62-213.440(1), F.A.C.]
{Permitting Note: Carbonaceous fuel consumption rates shall be expressed on a dry solids basis.}

B.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

B.4. Particulate Matter: PM emissions shall not exceed 0.3 pound per MMBtu heat input from carbonaceous fuels or 0.1 pound per MMBtu heat input from natural gas and fuel oil, or 109.5 pounds per hour. [Rule 62-296.410(1)(b)2, F.A.C., and permit 0050009-013-AC]

B.5. Sulfur Dioxide:
The following SO_2 emissions standards apply to the No. 3 Combination Boiler and the No. 4 Combination Boiler:

a. SO_2 emissions shall not exceed 1366 lb/hour when only the No. 3 Combination Boiler is operating based on a three-hour rolling CEMS average.
b. The combined SO_2 emissions from the No. 3 Combination Boiler and the No. 4 Combination Boiler shall not exceed 1658 lb/hr when both the No. 3 Combination Boiler and the No. 4 Combination Boiler are operating based on three-hour rolling CEMS averages.
c. SO_2 emissions shall not exceed 907 pounds per hour when only the No. 3 Combination Boiler is operating based on a 24-hour CEMS average.
d. When both the No. 3 Combination Boiler and the No. 4 Combination Boiler are operating, SO_2 emissions from the No. 3 Combination Boiler shall not exceed 329 lb/hr based on 24-hour rolling CEMS averages.

Permittee shall maintain a scrubber pH of 8.0 or greater (24-hour average) during times when the continuous monitor is being repaired and/or calibrated. Monitoring records shall be maintained and available for inspection by the Department. [Rule 62-213.440(1), F.A.C., and permits 0050009- 023-AC and 0050009-029-AC/PSD-FL-388A]

B.6. Total Reduced Sulfur: TRS emissions shall not exceed 5 parts per million by volume on a dry basis at standard conditions corrected to 10% oxygen as a 12-hour average. [Rule 62-296.404(3)(f)1, F.A.C.]

B.7. Visible Emissions: Visible emissions shall not exceed 30% opacity except for two minutes per hour of not more than 40% opacity. Visible emission limits shall be effective only if the visible emission measurement can be made without being substantially affected by plume mixing or moisture condensation. [Rules 62-296.410 (1)(b)1 and 62-296.404(2)(b), F.A.C.]

Excess Emissions

B.8. Excess Emissions: See Subsection M. Common Conditions, Excess Emissions.

Test Methods and Procedures

B.9. Emissions Tests: See Subsection M. Common Conditions, Test Methods and Procedures.

B.10. Particulate Matter: The test method for particulate matter shall be EPA Method 5, incorporated and adopted by reference in Rule 62-297.401(5), F.A.C. [Rules 62-296.410(3)(b) and 62-297.401(5), F.A.C.]

B.11. Sulfur Dioxide: The test method for sulfur dioxide shall be EPA Method 6, incorporated and adopted by reference in Rule 62-297.401(6), F.A.C. [Rule 62-297.401(6), F.A.C.]

B.12. Total Reduced Sulfur: The test method for total reduced sulfur shall be EPA Method 16, 16A or 16B incorporated and adopted by reference in Rule 62-297.401(16), (16)(a), or (16)(b), F.A.C. [Rule 62-297.401(16), (16)(a) or (16)(b), F.A.C.]

B.13. Visible Emissions: The test method for visible emissions shall be DEP Method 9, incorporated and adopted by reference in Rule 62-297.401(9)(c), F.A.C. [Rules 62-296.410(3)(a) and 62-297.40199)(c), F.A.C.]

B.14. Carbon Monoxide: The test method for carbon monoxide shall be EPA Method 10, incorporated and adopted by reference in Rule 62-297.401(10), F.A.C. [Rule 62-297.401(10), F.A.C.]

B.15. Nitrogen Oxides: The test method for nitrogen oxides shall be EPA Method 7E, incorporated and adopted by reference in Rule 62-297.401(7)(e), F.A.C. [Rule 62-297.401(7)(e), F.A.C.]

B.16. Volatile Organic Compounds: The test method for volatile organic compounds shall be EPA Method 25A, incorporated and adopted by reference in Rule 62-297.401(25)(a), F.A.C. [Rule 62-297.401(25)(a), F.A.C.]
{Permitting Note: Other test methods and alternate compliance procedures may be used only after prior Departmental approval has been obtained in writing.}

Monitoring of Operations

B.17. Total Reduced Sulfur: When routing TRS gases to the No. 3 Combination Boiler for thermal destruction, the gases shall be introduced in the flame zone, with the primary fuel or, with the combustion air. TRS gases shall be subject to a minimum of 1,200º Fahrenheit for at least 0.5 seconds. [Rule 62-296.404(5)(d), F.A.C., 40 CFR 60.283(a)(1)(iii), and permit 0050009-013-AC]

B.18. Determination of Process Variables: See Subsection M. Common Conditions, Determination of Process Variables.

Compliance Assurance Monitoring (CAM) Requirements

B.19. This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. [40 CFR 64 and, Rules 62-204.800 and 62-213.440(4)(b)4., F.A.C.]

Recordkeeping and Reporting Requirements

B.20. Permittee shall monitor the actual emissions of NO_X, CO and VOC and use the most reliable information available to calculate and maintain a record for the annual emissions in tons per calendar year, for a period of five years following resumption of regular operations (after permit changes). Reliable actual emissions information for NO_X and CO shall be obtained through annual stack testing. Emissions shall be computed in accordance with Rule 62-210.370(2)(d), F.A.C., Emissions Computation and Reporting.

Permittee shall report to the Department within 60 days after the end of each year during which records must be generated, setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

a. The name, address and telephone number of the owner or operator of the major stationary source;
b. The annual emission calculations as stated above;
c. If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and,
d. Any other information that the owner or operator wishes to include in the report.

The information required to be documented and maintained above, shall be submitted to the Department, which shall make it available for review to the general public. [Rule 62-212.300(1)(e), F.A.C.; PSD Avoidance]

NESHAP Requirements

B.21. When routing condensate stripper off-gases to this boiler for thermal destruction, the HAP emission stream shall be introduced in the flame zone, with the primary fuel, or with the combustion air. Permittee shall comply with applicable portions of 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry (See EU 034, Pulping System). [40 CFR 63.443(d)(4) and permit 0050009-013-AC]

Section III. Emissions Unit(s) and Conditions

Subsection C. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
016	No. 4 Combination Boiler

The No. 4 Combination Boiler started up on October 24, 1989, and burns wood, bark, primary clarified wood fibers, secondary solids (residuals) from the aerated stabilization basin, coal, natural gas, and/or No. 2 fuel oil or No. 6 fuel oil. PM emissions are controlled by a fly ash arrestor followed by a wet scrubber. The No. 4 Combination Boiler serves as a control device for the condensate SOG. The No. 4 Combination Boiler is also the backup control device for the NCG from the MEE System and from the BDS. HAP and TRS emissions are controlled by injecting the gases into the boiler in the flame zone, with the primary fuel, or with the combustion air. This boiler is regulated by Rule 62-296.410, F.A.C., Carbonaceous Fuel Burning Equipment, Rule 62-296.404, F.A.C., Kraft Pulp Mills and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

As a backup to the Lime Kiln, non-condensable gases (TRS/HAP/VOC) from the BDS and from the MEE system are transported to the No. 4 Combination Boiler for thermal destruction. Also, as a backup to the No. 3 Combination Boiler, condensate SOG is transported to this boiler for thermal destruction of HAP and TRS.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Permitted Capacity. The total maximum operational heat input of this emissions unit is 545 MMBtu per hour based on a 24-hour average. The heat input shall not exceed 472 MMBtu per hour from fuel oil, 395 MMBtu per hour from coal, 474 MMBtu per hour from carbonaceous fuels, or 512 MMBtu per hour from natural gas. The total heat input to the No. 3 Combination Boiler and the No. 4 Combination Boiler due to carbonaceous fuels shall not exceed 501 MMBtu per hour based on a 24-hour average. This unit is authorized to operate at the following steam production rates:

a. When all boilers at the plant are in operation, the maximum continuous steam rate for the No. 4 Combination Boiler shall not exceed 300,000 pounds per hour (24-hour average).
b. When at least one of the other plant boilers is not in operation, the maximum continuous steam rate for the No. 4 Combination Boiler shall not exceed 330,000 pounds per hour (24-hour average).

Permittee shall install, calibrate, maintain, and operate equipment to continuously monitor and record the steam production rate to demonstrate compliance with this requirement. [Rules 62-4.160(2), 62-210.200(PTE) and 62-213.440(1), F.A.C., and permits 0050009-008-AC and 0050009-022-AC]
{Permitting Note: The capacity limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability.}

C.2. Methods of Operation - (i.e., Fuels). This emissions unit may burn carbonaceous fuels [includes wood, bark, primary clarified wood fibers, and secondary solids (residuals) from the aerated stabilization basin], coal (maximum of 1.7% sulfur by dry weight), natural gas and No. 2 fuel oil or No. 6 fuel oil (maximum of 2.4% sulfur by weight). Records of the sulfur content for each shipment of fuel oil and coal shall be maintained and available for inspection by the Department. On-site blending of fuel oil to achieve the sulfur standard is prohibited. [Rules 62-4.160(2) and 62-213.440(1), F.A.C.]
{Permitting Note: Carbonaceous fuel consumption rates shall be expressed on a dry solids basis.}

C.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

C.4. Particulate Matter: PM emissions shall not exceed 0.1 pound per MMBtu of heat input from fossil fuel firing, and 0.3 pound per MMBtu heat input from carbonaceous fuels, or 86.7 pounds per hour. [Rule 62-296.410(1)(b)2, F.A.C. and permit 0050009-013-AC]

C.5. Sulfur Dioxide:
The following SO_2 emissions standards apply to the No. 3 Combination Boiler and the No. 4 Combination Boiler:

a. The combined SO_2 emissions from the No. 3 Combination Boiler and the No. 4 Combination Boiler shall not exceed 1658 lb/hr when both the No. 3 Combination Boiler and the No. 4 Combination Boiler are operating and the SO_2 emissions from the No. 4 Combination Boiler shall not exceed 1183 lb/hour based on 3-hour rolling CEMS averages.
b. SO_2 emissions shall not exceed 690 pounds per hour when only the No. 4 Combination Boiler is operating based on a 24-hour CEMS average. [Rules 62-296.340(BART), F.A.C., and 0050009-029-AC]
c. When both the No. 3 Combination Boiler and the No. 4 Combination Boiler are operating, SO_2 emissions from the No. 4 Combination Boiler shall not exceed 643 lb/hr based on 24-hour rolling CEMS averages.

Permittee shall maintain a scrubber pH of 8.0 or greater (24-hour average) during times when the continuous monitor is being repaired and/or calibrated. Monitoring records shall be maintain and available for inspection by the Department. [Rule 62-213.440(1), F.A.C., and permits 0050009-023-AC and 0050009-029-AC/PSD-FL-388A]

C.6. Visible Emissions: Visible emissions shall not exceed 30% opacity except for two minutes period per hour of not more than 40% opacity. Visible emission limits shall be effective only if the visible emission measurement can be made without being substantially affected by plume mixing or moisture condensation. [Rules 62-296.410 (1)(b)1 and 62-296.404(2)(b), F.A.C.]

C.7. Total Reduced Sulfur: TRS emissions shall not exceed 5 parts per million by volume on a dry basis at standard conditions corrected to 10% oxygen as a 12-hour average. [Rule 62-296.404(3)(f)1, F.A.C.]

Excess Emissions

C.8. Excess Emissions: See Subsection M. Common Conditions, Excess Emissions.

Test Methods and Procedures

C.9. Emissions Tests: See Subsection M. Common Conditions, Test Methods and Procedures.

C.10. Particulate Matter: The test method for particulate matter shall be EPA Method 5, incorporated and adopted by reference in Rule 62-297.401(5), F.A.C. [Rules 62-296.410(3)(b) and 62-297.401(5), F.A.C.]

C.11. Sulfur Dioxide: The test method for SO_2 shall be EPA Method 6, incorporated and adopted by reference in Rule 62-297.401(6), F.A.C. [Rule 62-297.401(6), F.A.C. and permit AC03-190964]

C.12. Visible Emissions: The test method for visible emissions shall be DEP Method 9, incorporated and adopted by reference in Chapter 62-297.401(9)(c), F.A.C. [Rules 62-296.410(3)(a) and 62-297.401(9)(c), F.A.C.]

C.13. Total Reduced Sulfur: The test method for total reduced sulfur shall be EPA Method 16, 16A or 16B incorporated and adopted by reference in Rule 62-297.401(16), (16)(a) or (16)(b), F.A.C. [Rules 62-297.404(4)(b)3, and 62-297.401(16), (16)(a) or (16)(b), F.A.C.]

Monitoring of Operations

C.14. Total Reduced Sulfur: When routing TRS gases to the No. 4 Combination Boiler for thermal destruction, the gases shall be introduced in the flame zone, with the primary fuel, or with the combustion air. TRS gases shall be subject to a minimum of 1,200 degrees Fahrenheit for at least 0.5 seconds. [Rule 62-296.404(5)(d), F.A.C., 40 CFR 60.283(a)(1)(iii), and permit 0050009-013-AC]

C.15. Determination of Process Variables: See Subsection M. Common Conditions, Determination of Process Variables.

Compliance Assurance Monitoring (CAM) Requirements

C.16. This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. [40 CFR 64 and Rules 62-204.800 and 62-213.440(4)(b)4., F.A.C.]

NESHAP Requirements

C.17. When routing condensate stripper off-gases to this boiler for thermal destruction, the HAP emission stream shall be introduced in the flame zone, with the primary fuel, or with the combustion air. Permittee shall comply with applicable portions of 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry. [40 CFR 63.443(d)(4) and permit 0050009-013-AC]

Section III. Emissions Unit(s) and Conditions

Subsection D. This section addresses the following emissions units.

E.U. ID No.	Brief Description
021	No. 1 Smelt Dissolving Tank with Venturi Scrubber to control emissions
022	No. 2 Smelt Dissolving Tank with Venturi Scrubber to control emissions

Smelt is dissolved in weak wash to yield green liquor. PM emissions are controlled by venturi scrubbers. TRS emissions are controlled by the use of weak wash as the scrubber media. The weak wash scrubber flow is monitored as a surrogate compliance parameter. No. 1 Smelt Dissolving Tank started up on January 24, 1985. No. 2 Smelt Dissolving Tank started up on October 23, 1988. The smelt dissolving tanks are regulated by Rule 62-296.404, F.A.C., Kraft Pulp Mills. These emissions units are also subject to applicable portions of 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources.

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

D.1. Permitted Capacity. The maximum operating rate of each unit is 123,700 pounds of dry virgin black liquor solids per hour fired in its respective recovery furnace. Records of the black liquor solids throughput for each smelt dissolving tank shall be maintained and available for inspection by the Department. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]
{Permitting Note: The capacity limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability.}

D.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

D.3. Particulate Matter: PM emissions from each unit shall not exceed 0.20 pounds per ton of black liquor solids fired. [40 CFR 63.862]

D.4. Total Reduced Sulfur: TRS emissions from each unit shall not exceed 0.048 pounds per 3,000 pounds of black liquor solids as hydrogen sulfide based on a 12-hour average. [Rule 62-296.404(3)(d)1, F.A.C.]

D.5. Visible Emissions: Visible emissions shall not exceed 20% opacity. If observed greater than 20% opacity by the Department, a special compliance test may be required to demonstrate compliance with the particulate matter mass emissions standard. [Rule 62-296.404(2)(b), F.A.C.]

Excess Emissions

D.6. Excess Emissions: See Subsection M. Common Conditions, Excess Emissions.

Test Methods and Procedures

D.7. Emissions Tests: See Subsection M. Common Conditions, Test Methods and Procedures.

D.8. Particulate Matter: The test method for particulate matter shall be EPA Method 5, incorporated and adopted by reference in Rule 62-297.401(5), F.A.C. [Rules 62-296.404(4)(c)1 and 62-297.401(5), F.A.C.]

D.9. Total Reduced Sulfur: The test method for total reduced sulfur shall be EPA test method 16, 16A or 16B, incorporated and adopted by reference in Rule 62-297.401(16), (16)(a), or (16)(b), F.A.C. [Rules 62-296.404(4)(c)3, and 62-297.401(16), (16)(a), or (16)(b), F.A.C.]

D.10. Visible Emissions: The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Rule 62-297.401(9), F.A.C. [Rule 62-297.401(9), F.A.C.]

Monitoring of Operations

D.11. Particulate Matter/Total Reduced Sulfur: Scrubber flow shall be maintained at a minimum of 325 gallons per minute of weak wash to each scrubber based on a three-hour average. The differential pressure shall be maintained between 7 and 11 inches of water. Monitoring requirements and compliance shall be in accordance with 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources. Monitoring records shall be maintained and available for inspection by the Department. The scrubber set points shall be re-evaluated during the annual testing and are subject to Department approval. [40 CFR 63.864 (MACT II Limits letter dated March 2, 2004) and Rule 62-296.404(3)(d)2, F.A.C.]

D.12. Determination of Process Variables: See Subsection M. Common Conditions, Determination of Process Variables.

D.13. Startup, Shutdown and Malfunction Plan: Permittee shall comply with all the applicable standards and requirements of 40 CFR 63.6(e) (Operation and Maintenance Requirements), and the facility's Startup, Shutdown and Malfunction Plan attached and incorporated by reference. [40 CFR 63.6(e)]

Recordkeeping and Reporting Requirements

D.14. Quarterly Emission Reports: See Subsection M. Common Conditions, Quarterly Reporting Requirements.

Section III. Emissions Unit(s) and Conditions

Subsection E. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
004	Lime Kiln with a venturi scrubber

The Lime Kiln started up on January 25, 1985, and utilizes ground petcoke with up to 8.0% sulfur by weight as a primary fuel, blended with No. 2 or No. 6 fuel oil with a maximum of 2.4% sulfur by weight, and natural gas. The maximum heat input rate for the petcoke burner system is 180 MMBtu per hour. For flame stability, ground petcoke is co-fired with oil or gas and constitutes up to 90% of the maximum heat input rate to the Lime Kiln. The Lime Kiln has a maximum operating rate of 85,000 pounds per hour of lime mud. The Lime Kiln is the primary control device to thermally destroy the NCG from the MEE System and from the BDS. TRS, NO_X, SO_2, and PM emissions are controlled by a venturi wet scrubber manufactured by Chemico, followed by a cyclone. TRS emissions are monitored with a CEMS. The Lime Kiln is regulated by 40 CFR 64 - CAM plan for SO_2, 40 CFR 60 Subpart BB - NSPS for Kraft Pulp Mills, 40 CFR 63 Subpart MM - NESHAP for Kraft Pulp Mills, 40 CFR 63 Subpart S - NESHAP for the Pulp and Paper Industry, and Rule 62-296.404, F.A.C.

In accordance with Rule 62-212.400(PSD), F.A.C., the above emission unit is subject to BACT determinations for emissions of NO_X and SO_2. The final BACT determinations are summarized in Appendix D of this permit. Throughout this permit, particulate matter emissions are referred to as PM emissions, which serve as a surrogate for regulating $PM_{2.5}$ and PM_{10} emissions.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

E.1. Permitted Capacity. The maximum allowable operating rate is 85,000 pounds per hour of lime mud input, (dry basis, 24-hour average), based on a maximum lime production of 36,700 pounds of lime (CaO) per hour (dry basis). Capacity records shall be maintained and available for inspection by the Department. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., and permits AC03-149719 and 0050009-015-AC]

E.2. Methods of Operation - (i.e., Fuels). This emission unit shall be fueled by a combination of ground petcoke (maximum 8% by weight sulfur). natural gas, and No. 2 fuel oil, and No. 6 fuel oil with maximum 2.4%, by weight sulfur. Records of the sulfur content of each shipment of petcoke and fuel oil shall be maintained and available for inspection by the Department. The combined fuel rate shall not exceed 180 MMBtu per hour heat input based on a 24-hour average. For flame stability, petcoke will be co-fired with fuel oil or natural gas and constitute up to 90% of the maximum heat input rate to the Lime Kiln. The blending of fuel oil to achieve the sulfur standard is prohibited. [Rules 62-4.160(2) and 62-213.440(1), F.A.C., and permit 0050009-028-AC, PSD-FL-388]

E.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

E.4. Particulate Matter: PM emissions from this unit shall not exceed 29.83 pounds per hour. [permit AC03-149719]
{Permitting Note: 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources limits the particulate matter concentration (0.064 grains per dry standard cubic foot, which equates to approximately 48 pounds per hour); however, the facility is limited to a maximum of 29.83 pounds per hour by Construction Permit AC03-149719.}

E.5. Total Reduced Sulfur: TRS emissions shall not exceed 20 parts per million by volume on a dry basis at standard conditions corrected to 10% oxygen as a 12-hour average. [Rule 62-296.404(3)(e)1, F.A.C.]

E.6. Visible Emissions: Visible emissions shall not exceed 20% opacity. If observed greater than 20% opacity by the Department, a special compliance test may be required to demonstrate compliance with the particulate matter mass emissions standard. [Rule 62-296.404(2)(b), F.A.C.]

E.7. Nitrogen Oxides: Based on fuel used, NO_X emissions shall not exceed the following:

Pollutant	Fuel	Emission Standards	Averaging Time
NOx	natural gas or fuel oil	110 ppmvd @ 10% O_2 and 68.0 lb/hour	30-day rolling average
	Petcoke blends	190 ppmvd @ 10% O_2 and 103.0 lb/hour	30-day rolling average

[Permit 0050009-028-AC, PSD-FL-388]

E.8. Sulfur Dioxide: Based on fuel used, SO_2 emissions shall not exceed the following:

Pollutant	Fuel	Emission Standards	Averaging Time
SO_2	No. 6 fuel oil	4.6 lb/hr and 0.25 lb/ton of CaO	3-hour average
	Petcoke blends	18.8 lb/hr and 1.02 lb/ton CaO	3-hour average

[Permit 0050009-028-AC, PSD-FL-388]

Excess Emissions

E.9. Excess Emissions: See Subsection M. Common Conditions, Excess Emissions.

Test Methods and Procedures

E.10. Required tests shall be performed in accordance with the following reference methods.

EPA Method	Description
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5	Particulate Matter (PM)
6 or 6C	Method for Determining Sulfur Dioxide Emissions (Instrumental)
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental)
9	Visible Emissions (VE)

16, 16A, 16B, or 16C	Total Reduced Sulfur (TRS)
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

E.11. Emissions Tests: See Subsection M. Common Conditions, Test Methods and Procedures.

Monitoring of Operations

E.12. Determination of Process Variables: See Subsection M. Common Conditions, Determination of Process Variables.

E.13 Scrubber Monitoring: Permittee shall monitor the following scrubber parameters: bull nozzle flow rate in gallons per minute, tangential flow rate in gallons per minute, and pressure differential in inches of water column. Permittee shall monitor these scrubber parameters in accordance with the provisions in 40 CFR 63 Subpart MM - Chemical Recovery Combustion Sources. To provide reasonable assurance of compliance with the SO_2 BACT standard, the minimum scrubber pH shall be 7.7, based on a 3-hour block average, as determined from measurements taken at least every 15 minutes. Operation below the specified minimum pH operating level is not a violation of this permit, in and of itself. However, continued operation below this level without corrective action may be considered circumvention of the air pollution control method. The permittee may re-evaluate the minimum pH operating level by conducting additional testing at reduced operating loads. If the test data indicates satisfactory compliance al a lower pH level for the reduced loads, the permittee shall submit a request for approval to the Department with data to support the request. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C., and permits 0050009-028-AC/PSD-FL-388 and 0050009-031-AC/PSD-FL-388B]

E.14. Monitoring Requirements: The scrubber flow shall be maintained at a minimum of 455 gallons per minute for the bull nozzle flow and 493 gallons per minute minimum for the tangential flow with a minimum differential pressure of 18 inches of water. The scrubber flow shall be based on a 3-hour average. The set point for these parameters will be re-evaluated during the annual testing and is subject to Department approval. Monitoring requirements and compliance shall be in accordance with 40 CFR 63 Subpart MM - NESHAP for Chemical Recovery Combustion Sources. Monitoring records shall be maintained and available for inspection by the Department. [40 CFR 63.864(e), MACT II Compliance letter dated March 10, 2004, and permit 0050009-028-AC/PSD-FL-388]

Continuous Monitoring Requirements

E.15. Total Reduced Sulfur Continuous Monitoring: See Subsection M. Common Conditions, Total Reduced Sulfur Continuous Emissions Monitoring Requirements.

E.16. Nitrogen Oxides Continuous Monitoring: Permittee shall properly install, calibrate, maintain and operate continuous emissions monitoring systems (CEMS) to measure and record NO_X emissions in units of the applicable standard. Permittee shall comply with the conditions of Appendix F (CEMS Requirements) for each CEMS required to be installed by this permit as the compliance method for the permitted emission standard. [Rules 62-4.070(3) and 62-212.400(PSD), F.A.C. and permit 0050009-028-AC/PSD-FL-388]

Compliance Assurance Monitoring (CAM) Requirements

E.17. This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. [40 CFR 64 and, Rules 62-204.800 and 62-213.440(4)(b)4., F.A.C.]

Recordkeeping and Reporting Requirements

E.18. Quarterly Emission Reports: See Subsection M. Common Conditions, Quarterly Reporting Requirements.

E.19. Fuel Sulfur Records: Records of the sulfur content of each shipment of fuel oil and petcoke shall be maintained and available for inspection by the Department. [Permit 0050009-028-AC/PSD-FL-388]

E.20. Operational Data: Permittee shall record the hours of operation and the sulfur content of each fuel in a written or electronic log. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. [Rule 62-4.070(3), F.A.C.]

E.21. Test Reports: See Subsection M. Common Conditions, Test Methods and Procedures.

E.22. Stack Test Reports: See Subsection M. Common Conditions, Test Methods and Procedures.

E.23. CEMS Required for Reporting Annual Emissions: Permittee shall use data from the CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rules 62-210.370(3) and 62-212.300(1)(e), F.A.C. The owner or operator shall follow the procedures in Appendix CEMS for calculating annual emissions.

E.24 Annual TRS and PM Emissions Reports: Permittee shall comply with the following monitoring, reporting and recordkeeping provisions to determine whether a PSD significant emissions increase occurred:

a. Permittee shall monitor the TRS and PM emissions using the most reliable information available. On a calendar year basis, Permittee shall calculate and maintain a record of the annual emissions (tons per year) for a period of 5 years after completing construction of the petcoke burner. Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.

b. Within 60 days after each calendar year following completion of construction of the petcoke burner, Permittee shall report to the Compliance Authority the annual emissions for each

unit during the calendar year that preceded submission of the report. The report shall contain the following:

1) The name, address and telephone number of the owner or operator of the major stationary source;
2) The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1, F.A.C.;
3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and
4) Any other information that the owner or operator wishes to include in the report.

c. The information required to be documented and maintained shall be submitted to the Compliance Authority, where it will be available for review to the general public.

d. Permittee shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the Compliance Authority for any regulatory purpose.

[Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

NSPS Requirements

E.25. 40 CFR 60 Subpart A - General Provisions Requirements: This emissions unit is subject to general provisions of 40 CFR 60 Subpart A - General Provisions Requirements. [Rule 62-204.800(8)(d), F.A.C.]

E.26. 40 CFR 60 Subpart BB - Kraft Pulp Mills: This emissions unit is subject to 40 CFR 60 Subpart BB - Kraft Pulp Mills. See Subsection M. Common Conditions, 40 CFR 60 Subpart BB - Standards of Performance for Kraft Pulp Mills.

NESHAP Requirements

E.27. When routing non-condensable gases to this unit for thermal destruction, the HAP emission stream shall be introduced in the flame zone or with the primary fuel. Permittee shall comply with applicable portions of 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry (see Emission Unit 034, Pulping System). [40CFR 63.443(d)(4)]

E.28. 40 CFR 63 Subpart MM - Chemical Recovery Combustion Sources: See Subsection M. Common Conditions, 40 CFR 63 Subpart MM - Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills.

E.29. 40 CFR 63 Subpart S - Pulp and Paper Industry: This emissions unit is subject to the applicable requirements of 40 CFR 63 Subpart S - National Emissions Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

E.30. Startup, Shutdown and Malfunction Plan: Permittee shall comply with all the applicable standards and requirements of 40CFR 63.6(e) - Operation and Maintenance Requirements, and the facility's Startup, Shutdown and Malfunction Plan, attached and incorporated by reference. [40 CFR 63.6(e)]

Section III. Emissions Unit(s) and Conditions

Subsection F. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
026	Pre-Evaporator, Nos. 1A and 3 Multiple Effect Evaporator (MEE) System

This emissions unit consists of a Pre-Evaporator, the No. 1A Evaporator set, the No. 3 Evaporator set, and associated equipment, which started up on January 24, 1985. The No. 1A Evaporator set and the No. 3 Evaporator set include two four-stage MEE systems and associated condensers, hot wells and concentrators. The evaporators are used to concentrate the weak black liquor prior to firing in the recovery furnaces. The off-gases (TRS/HAP/VOC) from these sources are collected in the low volume high concentration (LVHC) NCG collection system. The collected NCG are incinerated in the Lime Kiln or in the No. 4 Combination Boiler or the No. 3 Combination Boiler as backup. The maximum operating rate is 359,400 pounds of dry black liquor solids per hour. The MEE system is regulated by Rule 62-296.404, F.A.C.; 40 CFR 60 Subpart BB - Kraft Pulp Mills, and 40 CFR 63 Subpart S - Pulp and Paper Industry.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

F.1. Permitted Capacity. The maximum process input rate is 359,400 pounds of virgin dry black liquor solids per hour to the MEE system based on a 24-hour average. Capacity records shall be maintained and available for inspection by the Department. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., and permit 0050009-016-AC]

F.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Monitoring of Operations

F.3. Non-Condensable Gases (NCG): NCG shall be collected and transported to the Lime Kiln or the No. 4 Combination Boiler or the No. 3 Combination Boiler for incineration. The gases shall be introduced in the flame zone, with the primary fuel, or with the combustion air of the boiler. TRS gases shall be subject to a minimum of 1,200 degrees Fahrenheit for at least 0.5 seconds. Malfunctions shall be handled in accordance with the facility's TRS Venting Contingency Plan attached to and made a part of this permit. [Rule 62-296.404(3)(a), F.A.C., 40 CFR 60.283(a)(1)(iii), 40 CFR 63.443(d)(4), and permit 0050009-016-AC]

F.4. Total Reduced Sulfur Emissions: TRS emissions shall not be vented to the atmosphere at any point connected to or between the emissions unit and the control device except in the event of an emergency that presents a danger to life or property, or during those times when the control device is shut down for essential maintenance. A log of NCG venting to the atmosphere shall be maintained and available for inspection by the Department. The log shall include but not be limited to the date and time, duration, cause and corrective actions taken for each venting occurrence. In no event shall the cumulative venting time exceed ten days in any annual period. Each venting occurrence shall be reported to the Department verbally or by e-mail by the next

working day and a copy of the log entry submitted within 30 days. [Rule 62-4.404(3)(a)3, F.A.C.]

F.5. Startup, Shutdown and Malfunction Plan: Permittee shall comply with all the applicable standards and requirements of 40 CFR 63.6(e) (Operation and Maintenance Requirements), and the facility's Startup, Shutdown and Malfunction Plan attached and incorporated by reference. [40 CFR 63.6(e)]

Section III. Emissions Unit(s) and Conditions

Subsection G. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
027	Digester System, Non-Condensable Gas (NCG) Handling System

The digester system, started up on January 24, 1985, consists of 22 batch digesters, 5 blow tanks, an accumulator tank with both an upstream and a downstream condenser, and a turpentine recovery system (decanter, condenser and storage tank). The off-gases (TRS/HAP/VOC) are collected in the LVHC NCG collection system. TRS/HAP/VOC emissions are controlled by incineration in the Lime Kiln or in the No. 4 Combination Boiler or the No. 3 Combination Boiler as backup. The digester system is regulated by Rule 62-296.404, F.A.C., 40 CFR 60 Subpart BB - Kraft Pulp Mills, and 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

G.1. Permitted Capacity. For testing purposes only, the maximum allowable pulp production rate is 120 tons per hour of air-dried unbleached pulp (ADUP). [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C. and permit 0050009-005-AC, PSD-FL-288]

G.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Monitoring of Operations

G.3. Non-Condensable Gases (NCG): NCG shall be collected and transported to the Lime Kiln or the No. 4 Combination Boiler or the No. 3 Combination Boiler for incineration. The gases shall be introduced into the lime kiln or boiler in the flame zone, with the primary fuel, or with the combustion air. TRS gases shall be subject to a minimum of 1,200 degrees Fahrenheit for at least 0.5 seconds. Malfunctions shall be handled in accordance with the facility's TRS Venting Contingency Plan attached to and made a part of this permit. [Rule 62-296.404(3)(a), F.A.C.; 40 CFR 60.283(a)(1)(iii); 40 CFR 63.443(d)(4), and permit 0050009-013-AC]

G.4. Total Reduced Sulfur Emissions: TRS emissions shall not be vented to the atmosphere at any point connected to or between the emissions unit and the control device except in the event of an emergency that presents a danger to life or property, or during those times when the control device is shut down for essential maintenance. A log of NCG venting to the atmosphere shall be maintained and available for inspection by the Department upon request. The log shall include, but not limited to, the date and time, duration, cause, and corrective actions taken for each venting occurrence. In no event shall the cumulative venting time exceed ten days in any annual period. Each venting occurrence shall be reported to the Department verbally or by email by the next working day and a copy of the log entry submitted within 30 days. [Rule 62-296.404(3)(a)3, F.A.C.]

G.5. Startup, Shutdown and Malfunction Plan: Permittee shall comply with all the applicable standards and requirements of 40 CFR 63.6(e) - Operation and Maintenance Requirements, and

the facility's Startup, Shutdown and Malfunction Plan attached and incorporated by reference. [40 CFR 63.6(e)]

G.6. Determination of Process Variables: See Subsection M. Common Conditions, Determination of Process Variables.

Excess Emissions

G.7. Excess Emissions: See Subsection M. Common Conditions, Excess Emissions.

Section III. Emissions Unit(s) and Conditions

Subsection H. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
005	Lime Slaker with a wet cyclonic scrubber to control particulate matter emissions

Lime (CaO) from the Lime Kiln is added to green liquor (Na_2CO_3, Na_2S and Na_2SO_4) in the Lime Slaker, which started up on January 26, 1985. The product of this reaction is white liquor (NaOH and Na_2S), a caustic solution used for cooking wood chips. Lime mud is formed as a byproduct that is recovered and regenerated to lime in the Lime Kiln. The maximum operating rate is 81.6 tons per hour of green liquor solids and lime (60.39 tons per hour green liquor and 21.18 tons per hour lime). PM emissions are controlled by a wet-walled cyclone scrubber. The lime slaker is regulated by Rules 62-296.404, F.A.C. - Kraft Pulp Mills and 62-296.320, F.A.C. - General Pollutant Limiting Standards.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

H.1. Permitted Capacity. The maximum operating rate is 81.6 tons per hour (60.39 tons per hour green liquor and 21.18 tons per hour lime based on a 24-hour average (dry basis). [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]
{Permitting Note: The capacity limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability.}

H.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

H.3. Particulate Matter: PM shall not exceed 14.0 pounds per hour. [Air modeling analysis restriction for permit 0050009-005-AC, PSD-FL-288]

H.4. Visible Emissions: Visible emissions shall not exceed 20% opacity. Visible emission limits shall be effective only if the visible emission measurement can be made without being substantially affected by plume mixing or moisture condensation. If observed greater than 20% opacity by the Department, a special compliance test may be required to demonstrate compliance with the particulate matter mass emissions standard. [Rule 62-296.404(2)(b), F.A.C.]

Excess Emissions

H.5. Excess Emissions: See Subsection M. Common Conditions, Excess Emissions.

Test Methods and Procedures

H.6. Emissions Tests: See Subsection M. Common Conditions, Test Methods and Procedures.

H.7. Particulate Matter: The test method shall be EPA Method 5, incorporated and adopted by reference in Rule 62-297.401(5), F.A.C. [Rules 62-296.320(4)(a) and 62-297.401(5), F.A.C.]

H.8. Visible Emissions: The test method for visible emissions shall be EPA test method 9, incorporated and adopted by reference in Rule 62-297.401(9), F.A.C. [Rule 62-297.401(9), F.A.C.]

Monitoring of Operations

H.9. The weak wash flow to the scrubber shall not be less than 30 gallons per minute based on a 3-hour average. The flow shall be monitored continuously and recorded once per hour. Flow records shall be made available to the Department for inspection. The set point for this parameter will be re-evaluated during the annual testing and is subject to Department approval. [Rule 62-4.160(2), F.A.C., and permit AO03-252354]

H.10. Determination of Process Variables: See Subsection M. Common Conditions, Determination of Process Variables.

Compliance Assurance Monitoring (CAM) Requirements

H.11. This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. [40 CFR 64 and Rules 62-204.800 and 62-213.440(4)(b)4., F.A.C.]

Section III. Emissions Unit(s) and Conditions

Subsection I. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
030	Wood Yard

The Wood Yard started up on January 24, 1985. Wood chips are used as the raw material in the papermaking process with scrap wood and bark used as fuel to generate steam. Round wood (whole tree trunks) is received as either short wood or long wood. Purchased hardwood chips or softwood chips are also received. Bark is a byproduct of log processing and some bark is also purchased. The chipping process begins by passing logs through a debarker to remove bark, which is collected and transferred via conveyors and hogged to obtain a desired size. After processing, the bark is stored in piles, transferred to the bark bin, and then used as a fuel for the boilers at the facility. The logs are then chipped and the chips screened for proper size. Both purchased chips and manufactured chips are conveyed and stored in chip reclaimer storage piles. The facility has one softwood chip reclaimer storage pile and one hardwood chip reclaimer storage pile. Three cyclones associated with the bark transfer and conveying system are used to pneumatically convey the bark and to control PM emissions. Conveyors are covered and roads are paved and maintained to minimize PM entrainment. Four cyclones are used in the Screening Room to separate fines from the conveying air stream and to control PM emissions. The wood yard is regulated by Rule 62-296.320(4)(b)1 & 4, F.A.C. - General Pollutant Emission Limiting Standards.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

I.1. Permitted Capacity. The maximum combined operation rate of this emissions unit is 3,471,534 tons per year of round wood and purchased chips. [Rules 62-4.160(2), 62-210.200(PTE), F.A.C., permits 0050009-005-AC/PSD-FL-288 and 0050009-014-AC/PSD-FL-288(A), and permit 0050009-034-AC]

I.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

Recordkeeping and Reporting Requirements

I.3. Operating Records. Records of quantities of round wood and purchased chips received shall be maintained and available for inspection by the Department. [Rules 62-4.160(2), 62-210.200(PTE), F.A.C., permits 0050009-005-AC/PSD-FL-288 and 0050009-014-AC/PSD-FL-288(A), and permit 0050009-034-AC]

Section III. Emissions Unit(s) and Conditions

Subsection J. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
033	Bleach Plant with Wet Scrubber

The Bleach Plant started up on January 24, 1985. The bleaching towers and washers have been modified to allow for a 100 percent chlorine dioxide substitution capability to comply with 40 CFR 60 Subpart S - Pulp and Paper Industry, The bleach plant has a maximum process capacity of 1,250 tons per day of air dried unbleached pulp. The facility has one 40 tons per day chlorine dioxide generator and associated chlorine dioxide storage tank. HAP/VOC emissions from the bleach plant are controlled with a wet alkaline (using weak wash or white liquor) scrubber. The chlorine dioxide storage tank is vented to the chlorine dioxide plant scrubber. A closed vent system is used to collect HAP/VOC emissions from the washers, the towers, and the filtrate tanks where chlorine or chlorinated compounds are used and then, subsequently, treated in the wet scrubber. The bleach plant is regulated by 40 CFR 63 Subpart S - Pulp and Paper Industry.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

J.1. Permitted Capacity. The maximum operation rate of this emissions unit is 1,250 and 950 air-dried tons of unbleached pulp per day of hardwood and softwood, respectively. Operation records shall be maintained and available for inspection by the Department. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., and permit 0050009-018-AC]

J.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

40 CFR 63 Subpart S Requirements

J.3. 40 CFR 63.440 - Applicability: Each owner or operator must comply with the requirements of 40 CFR 63 Subpart A - General Provisions of this part, as indicated in Table 1 to this subpart (attached).

Emission Limitations and Standards

J.4. 40 CFR 63.445 - Standards for the bleaching system:
(a) Each bleaching system that does not use any chlorine or chlorinated compounds for bleaching is exempt from the requirements of this section. Owners or operators of the following bleaching systems shall meet all the provisions of this section:

(1) Bleaching systems that use chlorine;
(2) Bleaching systems bleaching pulp from kraft, sulfite, or soda pulping processes that uses any chlorinated compounds; or
(3) Bleaching systems bleaching pulp from mechanical pulping processes using wood or from any process using secondary or non-wood fibers that use chlorine dioxide.

(b) The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in 40 CFR 63.450.

(c) The control device used to reduce chlorinated HAP emissions (not including chloroform) from the equipment specified in paragraph (b) of this section shall:

(1) Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight;

(2) Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP; or

(3) Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP.

(d) The owner or operator of each bleaching system subject to paragraph (a)(2) of this section shall comply with paragraph (d)(1) or (d)(2) of this section to reduce chloroform air emissions to the atmosphere, except the owner or operator of each bleaching system complying with extended compliance under 40 CFR 63.440(d)(3)(ii) shall comply with paragraph (d)(1) of this section.

(1) Comply with the following applicable effluent limitation guidelines and standards specified in 40 CFR 430:

(i) Dissolving-grade kraft bleaching systems and lines 40 CFR 430.14 through 430.17;

(ii) Paper-grade kraft and soda bleaching systems and lines, 40 CFR 430.24(a)(1) and (e), and 40 CFR 430.26 (a) and (c);

(iii) Dissolving-grade sulfite bleaching systems and lines, 40 CFR 430.44 through 430.47; or

(iv) Paper-grade sulfite bleaching systems and lines, 40 CFR 430.54 (a) and (c), and 430.56 (a) and (c).

(2) Use no hypochlorite or chlorine for bleaching in the bleaching system or line.

J.5. 40 CFR 63.450 - Standards for enclosures and closed-vent systems: See Subsection M. Common Conditions, 40 CFR 63.450 - Standards for enclosures and closed-vent systems.

Test Methods and Procedures

J.6. 40 CFR 63.457 - Test methods and procedures: See Subsection M. Common Conditions, Test Methods and Procedures.

Monitoring of Operations

J.7. 40 CFR 63.453 - Monitoring Requirements: See Subsection M. Common Conditions, 40 CFR 63.453 - Monitoring Requirements.

J.8. Startup, Shutdown and Malfunction Plan: Permittee shall comply with all the applicable standards and requirements of 40 CFR 63.6(e) (Operation and Maintenance Requirements), and the facility's Startup, Shutdown and Malfunction Plan attached and incorporated by reference. [40 CFR 63.6(e)]

Recordkeeping and Reporting Requirements

J.9. 40 CFR 63.454 - Recordkeeping Requirements: See Subsection M. Common Conditions, 40 CFR 63.454 - Recordkeeping Requirements.

J.10. 40 CFR 63.455 - Reporting Requirements: See Subsection M. Common Conditions, 40 CFR 63.455 - Reporting Requirements.

Section III. Emissions Unit(s) and Conditions

Subsection K. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
034	Pulping System

The Pulping System started up on January 24, 1985. The LVHC NCG from the turpentine decanter, the turpentine condenser, the turpentine storage tank, the foul condensate storage tank blow heat recovery, the multiple effect evaporators and the batch digester system are collected and combusted in the Lime Kiln (primary NCG control system) or in the No. 4 Combination Boiler (back-up NCG control system to the Lime Kiln) or No. 3 Combination Boiler (back-up NCG control system to No. 4 Combination Boiler). A steam-heated condensate stripper treats the foul condensate streams from the blow heat accumulator tank, the turpentine system, the pre-evaporator, and the NCG system. The stripper system has a design capacity of 500 gallons per minute and consists of the following equipment: a foul condensate storage tank, a fiber filter, a stripper feed preheater, a condensate stripper, a primary reflux condenser, and a trim condenser. The non-condensed vapors from the reflux condenser are routed to the trim condenser and finally to the No. 3 Combination Boiler or the No. 4 Combination Boiler for thermal destruction. The pulping system is regulated by 40 CFR 63 Subpart S - NESHAP for Pulp and Paper Industry, and 40 CFR 63 Subpart RR - NESHAP for Individual Drain Systems.

The following specific conditions apply to the emissions unit listed above:

40 CFR 63 Subpart S - Pulp And Paper Industry, Requirements

K.1. 40 CFR 63.440 - Applicability: Each owner or operator must comply with the requirements of 40 CFR 63 Subpart A - General Provisions, of this part, as indicated in Table 1 to this subpart (attached).

Emission Limitations and Standards

40 CFR 63 Subpart S - Pulp and Paper Industry

K.2. 40 CFR 63.443 - Standards for the pulping system at kraft, soda, and semi-chemical processes:
(a) The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.

(1) At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each LVHC system;

(ii) Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (a)(1)(ii)(A) or (ii)(B) or the combined rate specified in paragraph (a)(1)(ii)(C) of this section.

(A) Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).

(B) Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton).

(C) Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP (0.3 pounds per ton).

(iii) Each pulp washing system;

(iv) Each decker system that:

(A) Uses any process water other than fresh water or paper machine white water; or

(B) Uses any process water with a total HAP concentration greater than 400 parts per million by weight; and

(v) Each oxygen delignification system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraphs (a)(1)(i), (a)(1)(iii), and (a)(1)(v) of this section and the following equipment systems shall be controlled:

(i) Each knotter system;

(ii) Each screen system;

(iii) Each decker system; and

(iv) Each weak liquor storage tank.

(b) The owner or operator of each pulping system using a semi-chemical or soda process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (c) and (d) of this section.

(1) At each existing affected source, the total HAP emissions from each LVHC system shall be controlled.

(2) At each new affected source, the total HAP emissions from each LVHC system and each pulp washing system shall be controlled.

(c) Equipment systems listed in paragraphs (a) and (b) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in 40 CFR 63.450.

(d) The control device used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this section shall:

(1) Reduce total HAP emissions by 98 percent or more by weight; or

(2) Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or

(3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871° C (1600° F) and a minimum residence time of 0.75 seconds; or

(4) Reduce total HAP emissions using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.

(e) Periods of excess emissions reported under 40 CFR 63.455 shall not be a violation of 40 CFR 63.443(c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:

(1) One percent for control devices used to reduce the total HAP emissions from the LVHC system; and

(2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and

(3) Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

K.3. 40 CFR 63.446 - Standards for kraft pulping process condensates:

(a) The requirements of this section apply to owners or operators of kraft processes subject to the requirements of this subpart.

(b) The pulping process condensates from the following equipment systems shall be treated to meet the requirements specified in paragraphs (c), (d), and (e) of this section:

(1) Each digester system;

(2) Each turpentine recovery system;

(3) Each evaporator stage where weak liquor is introduced (feed stages) in the evaporator system;

(4) Each HVLC collection system; and

(5) Each LVHC collection system.

(c) One of the following combinations of HAP-containing pulping process condensates generated, produced, or associated with the equipment systems listed in paragraph (b) of this section shall be subject to the requirements of paragraphs (d) and (e) of this section:

(1) All pulping process condensates from the equipment systems specified in paragraphs (b)(1) through (b)(5) of this section.

(2) The combined pulping process condensates from the equipment systems specified in paragraphs (b)(4) and (b)(5) of this section, plus pulping process condensate stream(s) that in total contain at least 65 percent of the total HAP mass from the pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(3) of this section.

(3) The pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(5) of this section that in total contain a total HAP mass of 3.6 kilograms or more of total HAP per megagram (7.2 pounds per ton) of ODP for mills that do not perform bleaching or 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP for mills that perform bleaching.

(d) The pulping process condensates from the equipment systems listed in paragraph (b) of this section shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Each closed collection system shall meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962 of Subpart RR of this part, except for closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 40 CFR 63.693 as specified in 40 CFR 63.962 (a)(3)(ii), (b)(3)(ii)(A), and (b)(5)(iii); and

(2) If a condensate tank is used in the closed collection system, the tank shall meet the following requirements:

(i) The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in 40 CFR 63.450 and routed to a control device that meets the requirements in 40 CFR 63.443(d); and

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(e) Each pulping process condensate from the equipment systems listed in paragraph (b) of this section shall be treated according to one of the following options:

(1) Recycle the pulping process condensate to an equipment system specified in 40 CFR 63.443(a) meeting the requirements specified in 40 CFR 63.443(c) and (d); or
(2) Discharge the pulping process condensate below the liquid surface of a biological treatment system meeting the requirement specified in paragraph (e)(3) of this section; or
(3) Treat the pulping process condensates to reduce or destroy the total HAPs by at least 92 percent or more by weight; or
(4) At mills that do not perform bleaching, treat the pulping process condensates to remove 3.3 kilograms or more of total HAP per megagram (6.6 pounds per ton) of ODP, or achieve a total HAP concentration of 210 parts per million or less by weight at the outlet of the control device; or
(5) At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram (10.2 pounds per ton) of ODP, or achieve a total HAP concentration of 330 parts per million or less by weight at the outlet of the control device.

(f) Each HAP removed from a pulping process condensate stream during treatment and handling under paragraphs (d) or (e) of this section, except for those treated according to paragraph (e)(2) of this section, shall be controlled as specified in 40 CFR 63.443(c) and (d).
(g) For each steam stripper system used to comply with the requirements specified in paragraph (e)(3) of this section, periods of excess emissions reported under 40 CFR 63.455 shall not be a violation paragraphs (d), (e), and (f) of this section provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent.
(h) Each owner or operator of a new or existing affected source subject to the requirements of this section shall evaluate all new or modified pulping process condensates or changes in the annual bleached or non-bleached ODP used to comply with paragraph (i) of this section, to determine if they meet the applicable requirements of this section.
(i) For the purposes of meeting the requirements in paragraphs (c)(3), (e)(4), or (e)(5) of this section at mills producing both bleached and unbleached pulp products, owners and operators may meet a prorated mass standard that is calculated by prorating the applicable mass standards (kilograms of total HAP per megagram of ODP) for bleached and unbleached pulp products specified in paragraphs (c)(3), (e)(4), or (e)(5) of this section by the ratio of annual megagrams of bleached and unbleached ODP.

K.4. 40 CFR 63.447 Clean condensate alternative: As an alternative to the requirements specified in 40 CFR 63.443(a)(1)(ii) through (a)(1)(v) for the control of HAP emissions from pulping systems using the kraft process, an owner or operator must demonstrate to the satisfaction of the Administrator, by meeting all the requirements below, that the total HAP emissions reductions achieved by this clean condensate alternative technology are equal to or greater than the total HAP emission reductions that would have been achieved by compliance with 40 CFR 63.443(a)(1)(ii) through (a)(1)(v).
(a) For the purposes of this section only the following additional definitions apply.

(1) *Clean condensate alternative affected source* means the total of all HAP emission points in the pulping, bleaching, causticizing, and papermaking systems (exclusive of HAP emissions attributable to additives to paper machines and HAP emission points in the LVHC system).
(2) *Causticizing system* means all equipment associated with converting sodium carbonate into active sodium hydroxide. The equipment includes smelt dissolving tanks, lime mud washers and storage tanks, white and mud liquor clarifiers and storage tanks, slakers, slaker grit washers, lime kilns, green liquor clarifiers and storage tanks, and dreg washers ending with the white liquor storage tanks prior to the digester system, and any

other equipment serving the same function as those previously listed.

(3) *Papermaking system* means all equipment used to convert pulp into paper, paperboard, or market pulp, including the stock storage and preparation systems, the paper or paperboard machines, and the paper machine white water system, broke recovery systems, and the systems involved in calendering, drying, on-machine coating, slitting, winding, and cutting.

(b) Each owner or operator shall install and operate a clean condensate alternative technology with a continuous monitoring system to reduce total HAP emissions by treating and reducing HAP concentrations in the pulping process water used within the clean condensate alternative affected source.

(c) Each owner or operator shall calculate HAP emissions on a kilogram per megagram of ODP basis and measure HAP emissions according to the appropriate procedures contained in 40 CFR 63.457.

(d) Each owner or operator shall determine the baseline HAP emissions for each equipment system and the total of all equipment systems in the clean condensate alternative affected source based on the following:

(1) Process and air pollution control equipment installed and operating on December 17, 1993, and;

(2) Compliance with the following requirements that affect the level of HAP emissions from the clean condensate alternative affected source:

(i) The pulping process condensates requirements in 40 CFR 63.446;

(ii) The applicable effluent limitation guidelines and standards in 40 CFR 430 Subparts A, B, D, and E; and

(iii) All other applicable requirements of local, State, or Federal agencies or statutes.

(e) Each owner or operator shall determine the following HAP emission reductions from the baseline HAP emissions determined in paragraph (d) of this section for each equipment system and the total of all equipment systems in the clean condensate alternative affected source:

(1) The HAP emission reduction occurring by complying with the requirements of 40 CFR 63.443(a)(1)(ii) through (a)(1)(v), and

(2) The HAP emissions reduction occurring by complying with the clean condensate alternative technology.

(f) For the purposes of all requirements in this section, each owner or operator may use as an alternative, individual equipment systems (instead of total of all equipment systems) within the clean condensate alternative affected source to determine emissions and reductions to demonstrate equal or greater than the reductions that would have been achieved by compliance with 40 CFR 63.443(a)(1)(ii) through (a)(1)(v).

(g) The initial and updates to the control strategy report specified in 40 CFR 63.455(b) shall include to the extent possible the following information:

(1) A detailed description of:

(i) The equipment systems and emission points that comprise the clean condensate alternative affected source;

(ii) The air pollution control technologies that would be used to meet the requirements of 40 CFR 63.443(a)(1)(ii) through (a)(1)(v); and

(iii) The clean condensate alternative technology to be used.

(2) Estimates and basis for the estimates of total HAP emissions and emission reductions to fulfill the requirements paragraphs (d), (e), and (f) of this section.

(h) Each owner or operator shall report to the Administrator by the applicable compliance date specified in 40 CFR 63.440(d) or (e) the rationale, calculations, test procedures, and data

documentation used to demonstrate compliance with all the requirements of this section.

40 CFR 63 Subpart RR - Individual Drain Systems

K.5. 40 CFR 63.962 - Standards:

(a) Permittee subject to this subpart shall control air emissions from the individual drain system using one or a combination of the following:

(1) Covers, water seals, and other air emission control equipment as specified in paragraph (b) of this section.

(2) Hard-piping.

(3) Venting of the individual drain system through a closed vent system to a control device in accordance with the following requirements:

(i) The individual drain system is designed and operated such that an internal pressure in the vapor headspace in the system is maintained at a level less than atmospheric pressure when the control device is operating, and

(ii) The closed vent system and control device are designed and operated in accordance with the requirements of 40 CFR 63.69.

(b) Owners and operators controlling air emissions from an individual drain system in accordance with paragraph (a)(1) of this section shall meet the following requirements:

(1) The individual drain system shall be designed to segregate the organic vapors from regulated material managed in the controlled individual drain system from entering any other individual drain system that is not controlled for air emissions in accordance with the standards specified in this subpart.

(2) Drain control requirements. Each drain shall be equipped with either a water seal or a closure device in accordance with the following requirements:

(i) When a water seal is used, the water seal shall be designed such that either:

(A) The outlet to the pipe discharging the regulated-material extends below the liquid surface in the water seal of the drain; or

(B) A flexible shield or other device is installed which restricts wind motion across the open space between the outlet of the pipe discharging the regulated material and the drain.

(ii) When a closure device is used (e.g., securing a cap or plug on a drain that is not receiving regulated-material), the closure device shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the drain opening and the closure device.

(3) Junction box control requirements. Each junction box shall be equipped with controls as follows:

(i) The junction box shall be equipped with a closure device (e.g., manhole cover, access hatch) that is designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the junction box opening and the closure device.

(ii) If the junction box is vented, the junction box shall be vented in accordance with the following requirements:

(A) The junction box shall be vented through a closed vent system to a control device except as provided for in paragraph (b)(3)(ii)(B) of this section. The closed vent system and control device shall be designed

and operated in accordance in accordance with the standards specified in 40 CFR 63.693.

(B) As an alternative to paragraph (b)(3)(ii)(A) of this section, the owner or operator may vent the junction box directly to the atmosphere when all of the following conditions are met:

(1) The junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level. Large changes in the size of the junction box vapor headspace created by using a pump to repeatedly empty and then refill the junction box do not meet this condition.

(2) The vent pipe installed on the junction box shall be at least 90 centimeters in length and no greater than 10 centimeters in nominal inside diameter.

(3) Water seals are installed at the liquid entrance(s) to or exit from the junction box to restrict ventilation in the individual drain system and between components in the individual drain system. The owner or operator shall demonstrate (e.g., by visual inspection or smoke test) upon request by the Administrator that the junction box water seal is properly designed and restricts ventilation.

(4) Sewer line control requirements. Each sewer line shall not be open to the atmosphere and shall be covered or closed in a manner such that there are no visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.

(5) Operating requirements. The owner or operator shall operate the air emission controls required by paragraphs (b)(2) through (b)(4) of this section in accordance with the following requirements:

(i) Each closure device shall be maintained in a closed position whenever regulated-material is in the individual drain system except when it is necessary to remove or open the closure device for sampling or removing material in the individual drain system, or for equipment inspection, maintenance, or repair.

(ii) Each drain equipped with a water seal and open to the atmosphere shall be operated to ensure that the liquid in the water seal is maintained at the appropriate level. Examples of acceptable means for complying with this provision include but are not limited to using a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap; continuously dripping water into the trap using a hose; or regular visual observations.

(iii) Each closed-vent system and the control device used to comply with paragraph (b)(3)(ii)(A) of this section shall be operated in accordance with the standards specified in 40 CFR 63.693.

K.6. 40 CFR 63.450 - Standards for enclosures and closed-vent systems: See Subsection M. Common Conditions, 40 CFR 63.450 - Standards for enclosures and closed-vent systems.

Test Methods and Procedures

K.7. 40 CFR 63.457 - Test methods and procedures: See Subsection M. Common Conditions, Test Methods and Procedures.

Monitoring of Operations

K.8. Startup, Shutdown and Malfunction Plan: Permittee shall comply with all the applicable standards and requirements of 40 CFR 63.6(e) (Operation and Maintenance Requirements), and the facility's Startup, Shutdown and Malfunction Plan attached and incorporated by reference. [40 CFR 63.6(e)]

K.9. 40 CFR 63.964 Inspection and monitoring requirements:
(a) Permittee shall inspect the individual drain system in accordance with the following requirements:

(1) The individual drain system shall be visually inspected by Permittee as follows to check for defects that could result in air emissions to the atmosphere.

(i) Permittee shall visually inspect each drain as follows:

(A) In the case when the drain is using a water seal to control air emissions, Permittee shall verify appropriate liquid levels are being maintained and identify any other defects that could reduce water seal control effectiveness.

(B) In the case when the drain is using a closure device to control air emissions, Permittee shall visually inspect each drain to verify that the closure device is in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing plugs, caps, or other closure devices.

(ii) Permittee shall visually inspect each junction box to verify that closure devices are in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(iii) Permittee shall visually inspect the unburied portion of each sewer line to verify that all closure devices are in place and there are no defects.
Defects include, but are not limited to, visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.

(iv) Permittee shall perform the inspections initially at the time of installation of the water seals and closure devices for the individual drain system and, thereafter, at least once every year.

(v) In the event that a defect is detected, Permittee shall repair the defect in accordance with the requirements of paragraph (b) of this section.

(vi) Permittee shall maintain a record of the inspection in accordance with the requirements specified in 40 CFR 63.965(a) of this subpart.

(2) Permittee shall inspect and monitor the closed-vent system and the control device in accordance with the requirements specified in 40 CFR 63.693.

(b) Permittee shall repair all detected defects as follows:

(1) Permittee shall make first efforts at repair of the defect no later than five calendar days after detection and repair shall be completed as soon as possible but no later than 15 calendar days after detection except as provided in paragraph (b)(2) of this section.

(2) Repair of a defect may be delayed beyond 15 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the individual drain system and no alternative capacity is available at the facility site to accept the regulated-material normally managed in the individual drain system. In this case, the owner or operator shall repair the defect at the next time the process or unit that is generating the regulated-material managed in the individual drain system stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(3) Permittee shall maintain a record of the defect repair in accordance with the requirements specified in 40 CFR 63.965(a)(3) of this subpart.

K.10 40 CFR 63.453 - Monitoring Requirements: See Subsection M. Common Conditions, 40 CFR 63.453 - Monitoring Requirements.

Recordkeeping and Reporting Requirements

K.11. 40 CFR 63.454 - Recordkeeping Requirements: See Subsection M. Common Conditions, 40 CFR 63.454 - Recordkeeping Requirements.

K.12. 40 CFR 63.455 - Reporting Requirements: See Subsection M. Common Conditions, 40 CFR 63.455 - Reporting Requirements.

Section III. Emissions Unit(s) and Conditions

Subsection L. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
038	Petcoke Handling and Storage Silo

Ground petcoke is delivered to the facility by truck and rail and then is pneumatically conveyed to a 250-ton ground petcoke storage silo. The storage silo vents through a baghouse, to control PM emissions, prior to discharging to the atmosphere. The ground petcoke drops into a weigh bin from the storage silo before being conveyed to the kiln burner through the use of a blower and eductor. The piping system that delivers the petcoke to the kiln burner is completely enclosed. The displaced air from the weigh bin is redirected to the storage silo and exits the storage silo baghouse. The petcoke handling and storage silo is regulated by Rule 62-296.320, F.A.C., General Pollutant Limiting Standards.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

L.1. Permitted Capacity - Loading Rate. For compliance testing purposes, the maximum loading rate into the silos shall be 50 tons per hour. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., and permit 0050009-028-AC]

L.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C., and permit 0050009-028-AC]

Emission Limitations and Standards

L.3. Visible Emissions: Visible emissions from the baghouse vent shall not exceed 5% opacity. The minimum observation period for a visible emissions compliance test shall be 30 minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C., and permit 0050009-028-AC]

Test Methods and Procedures

L.4. Visible Emissions: The test method for visible emissions shall be EPA test method 9, incorporated and adopted by reference in Rule 62-297.401(9), F.A.C. [Rule 62-297.401(9), F.A.C.]

L.5. Visible Emissions Tests: See Subsection M. Common Conditions, Test Methods and Procedures. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

Section III. Emissions Unit(s) and Conditions

Subsection M. Common Conditions

{Permitting Note: The following conditions are placed here as a convenience and to avoid duplication. See specific conditions in Subsections A through L for applicability.}

M.1. Test Methods and Procedures:
(a) Emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. Tests shall be conducted each federal fiscal year (October 1- September 30) unless otherwise specified in the specific conditions of this permit. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Rule 62-297.310(7)(a)4, F.A.C.]
(b) Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted, provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2) & (2)b, F.A.C.]

M.2. Quarterly Reporting Requirements:
Permittee shall submit a quarterly written report of emissions in excess of any emission limiting standards.
(a) The report shall include the following information:

1. The magnitude of excess emissions and the date and time of commencement and completion of each time period in which excess emissions occurred.
2. Specific identification of each period of excess emissions that occurs including startups, shutdowns, and malfunctions of the affected emissions unit. An explanation of the cause of each period of excess emissions, and any corrective action taken or preventive measures adopted.
3. The date and time identifying each period during which each continuous emissions monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments.
4. When no excess emissions have occurred or the continuous emissions monitoring system(s) have not been operative, or have been repaired or adjusted, such information shall be stated in the report.

(b) Any owner or operator shall maintain a complete file of any measurements, including continuous emissions monitoring system, monitoring device, and performance testing measurements; any continuous emissions monitoring system performance evaluations; any continuous emissions monitoring system or monitoring device calibration checks; any adjustments and maintenance performed on these systems or devices; and any other information required, recorded in a permanent legible form available for inspection.
(c) Evaluation of Excess Emissions. The Department shall consider periods of excess emissions from any kraft recovery furnace, lime kiln, calciner or any other regulated TRS emissions unit to be evidence of improper operation and maintenance of the monitored emissions unit provided that:

1. For kraft recovery furnaces subject to the emissions limits of Rule 62-296.404(3)(c), F.A.C., the excess emissions occur during more than one percent of the total number of possible contiguous 12-hour periods of excess emissions in a calendar quarter rounded to the nearest whole number (excluding only the actual 12-hour periods during which a startup, shutdown or malfunction of the kraft recovery furnace occurred and only the actual 12-hour periods when the kraft recovery furnace was not operating), or
2. For lime kilns and calciners subject to the emissions limits of Rule 62-296.404(3)(e), F.A.C., the excess emissions occur during more than two percent of the total number of possible contiguous 12-hour periods of excess emissions in a calendar quarter rounded to the nearest whole number (excluding only the actual 12-hour periods during which a startup, shutdown or malfunction of the lime kiln, calciner, or their control equipment occurred and only the actual 12-hour periods when the lime kiln or calciner was not operating), or
3. For other regulated non-NSPS total reduced sulfur emissions units, the excess emissions as indicated by the appropriate surrogate parameters occur during more than one percent of the total number of possible contiguous 12-hour periods of excess emissions in a calendar quarter rounded to the nearest whole number (excluding only the actual 12-hour periods during which a startup, shutdown, or malfunction of the emissions unit or its control equipment occurred and only the actual 12-hour periods when the source was not operating), and
4. The Department determines that the affected emissions unit, including air pollution control equipment, is not maintained and operated in a manner which is consistent with good air pollution control practices for minimizing emissions. Such determination shall be based on the failure of the owner or operator of the facility to provide records of maintenance and operation of the emissions unit and related equipment showing operation consistent with good air pollution control practices. Good air pollution control practices shall include:
   a. Operation of all equipment within permit limits for loading rates and other process parameters,
   b. An adequate preventive maintenance program based on manufacturer's recommendations or other accepted industry practices,
   c. Training of personnel in the operation and maintenance of equipment,
   d. Visual and instrument inspections of equipment on a regular basis, and
   e. Maintenance of an adequate on-site, or readily available, supply of equipment for routine repairs.

(d) The owner or operator of any kraft pulp mill or tall oil plant shall notify the Department in writing within fourteen days of the date on which periods of excess emissions exceed the percentages allowed by Rule 62-296.404(6)(c)1 through 3, F.A.C.
[Rules 62-296.405(1)(g), 62-296.404(6), and 62-204.800(7), F.A.C.]

M.3. Determination of Process Variables:
The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

M.4. Total Reduced Sulfur Continuous Emissions Monitoring Requirements:
Permittee shall maintain a continuous monitoring system for monitoring total reduced sulfur (TRS) emissions. The TRS continuous emissions monitoring system shall be installed, calibrated, certified and operated pursuant to all of the following provisions:

a. The continuous emissions monitoring system shall monitor and record the concentration of total reduced sulfur (TRS) emissions on a dry basis and the percentage of oxygen by volume on a dry basis.

b. The continuous emissions monitoring system shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

c. The continuous emissions monitoring system shall be located downstream of the control device such that representative measurements of process parameters can be obtained.

d. The continuous emissions monitoring system shall be located, installed and certified pursuant to the provisions of 40 CFR 60 Appendix B - Performance Specification 2 and Performance Specification 3, and 40 CFR 60 Appendix B - Performance Specification 5, which are adopted by reference in Rule 62-204.800(7), F.A.C. The exception is that the phrase "or other approved alternative" in s. 3.2 of Performance Specification 5 is not adopted. For the purposes of compliance testing and certification of continuous emissions monitoring systems, 40 CFR 60 Appendix A - Reference Method 16 and Method 16A, adopted by reference in Rule 62-204.800(7), F.A.C., are to be used.

e. The continuous emissions monitoring system shall be in continuous operation, except when the emissions unit is not operating, or during system breakdowns, repairs, calibration checks, and zero and span adjustments.

f. During any initial compliance tests conducted pursuant to Rule 62-296.404, F.A.C., or within 30 days thereafter, and at such times as there is reason to believe the system does not conform to the performance specifications under this rule (for example, equipment repairs, replacements, excessive drift and such), the owner or operator of any affected emissions unit shall conduct continuous monitoring system performance evaluations and furnish the Department, within sixty days thereof, two copies of a written report of the results of such tests. These continuous emissions monitoring systems performance evaluations shall be conducted in accordance with the requirements and procedures contained in Rule 62-296.404(5)(b)1.d, F.A.C.

g. The continuous emissions monitoring system shall have a maximum span value not to exceed:

(i) A total reduced sulfur concentration of 30 ppm for the total reduced sulfur continuous emissions monitoring system on any new design direct-fired kraft recovery furnace that is not direct-fired, new design suspension-burning kraft recovery furnace, incinerator, digester system or multiple effect evaporator system.

(ii) A total reduced sulfur concentration of 50 ppm for the total reduced sulfur continuous emissions monitoring system on any old design kraft recovery furnace, new design kraft recovery furnace that is not direct-fired, new design direct-fired suspension-burning kraft recovery furnace, cross recovery furnace, lime kiln or calciner.

(iii) 20 percent oxygen for the continuous oxygen monitoring system.

h. The continuous emissions monitoring system shall be checked by the owner or operator in accordance with a written procedure at least once daily and after any maintenance to the system. The owner or operator shall check the zero (or low level value between 0 and 20 percent of span value) and span (90 to 100 percent of span value) calibration drifts. The zero and span shall be adjusted, as a minimum, whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications referenced in Rule 62- 296.404(5)(b)1.d, F.A.C. The system

must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified.
[Rule 62-296.404(5), F.A.C.]

M.5. Excess Emissions:
(1) Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing 1) best operational practices to minimize emissions are adhered to and 2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration.
(2) Excess emissions from existing fossil fuel steam generators resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.
(3) Excess emissions from existing fossil fuel steam generators resulting from boiler cleaning (soot blowing) and load change shall be permitted provided the duration of such excess emissions shall not exceed 3 hours in any 24-hour period and visible emissions shall not exceed Number 3 of the Ringelmann Chart (60 percent opacity), and providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this subparagraph, for boiler cleaning and load changes, at units which have installed and are operating, or have committed to install or operate, continuous opacity monitors.

Particulate matter emissions shall not exceed an average of 0.3 lbs. per million BTU heat input during the 3-hour period of excess emissions allowed by this subparagraph.
(4).Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.
(5) Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.
(6).In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(1) through (6), F.A.C.]
{Permitting Note: The requirements of this rule do not vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.}

M.6. 40 CFR 63.450 - Standards for enclosures and closed-vent systems:
(a) Each enclosure and closed-vent system specified in 40 CFR 63.443(c), 63.444(b), and 63.445(b) for capturing and transporting vent streams that contain HAP shall meet the requirements specified in paragraphs (b) through (d) of this section.
(b) Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified 40 CFR 63.457(e). Each enclosure or hood opening closed during the initial performance test specified in 40 CFR 63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

(c) Each component of the closed-vent system used to comply with 40 CFR 63.443(c), 63.444(b), and 63.445(b) that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in 40 CFR 63.457(d).
(d) Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in 40 CFR 63.443, 63.444, or 63.445 shall comply with either of the following requirements:

(1) On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or

(2) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.

M.7. 40 CFR 63.453 - Monitoring Requirements:
(a) Each owner or operator subject to the standards specified in 40 CFR 63.443(c) and (d), 63.444(b) and (c), 63.445(b) and (c), 63.446(c), (d), and (e), 63.447(b) or 63.450(d), shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS, as defined in 40 CFR 63.2 of this part) as specified in paragraphs (b) through (m) of this section, except as allowed in paragraph (m) of this section. The CMS shall include a continuous recorder.
(b) A CMS shall be operated to measure the temperature in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs for each thermal oxidizer used to comply with the requirements of 40 CFR 63.443(d)(1) through (d)(3). Owners and operators complying with the requirements in 40 CFR 63.443(d)(2) or (d)(3) shall monitor the parameter specified and for the temperature and concentration limits specified.
(c) A CMS shall be operated to measure and maintain the following parameters for each gas scrubber used to comply with the bleaching system requirements of 40 CFR 63.445(c).

(1) Minimum pH of 8.9 for of the gas scrubber effluent;

(2) Maximum gas flow rate of 10,000 acfm. The backup device is a minimum of 40 amps on the vent gas fan; and

(3) Minimum of 435 gallons per minute for the scrubber liquid influent flow rate.

(d) As an option to the requirements specified in paragraph (c) of this section, a CMS shall be operated to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching system outlet concentration requirement specified in 40 CFR 63.445(c)(2).
(e) The owner or operator of a bleaching system complying with 40 CFR 430.24 Subpart B, shall monitor the chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system during the extended compliance period specified in 40 CFR 63.440(d)(3).
(f) A CMS shall be operated to measure the gas scrubber parameters specified in paragraphs (c)(1) through (c)(3) of this section or those site specific parameters determined according to the procedures specified in paragraph (n) of this section to comply with the sulfite pulping system requirements specified in 40 CFR 63.444(c).
(g) A CMS shall be operated to measure the following parameters for each steam stripper used to comply with the treatment requirements in 40 CFR 63.446(e)(3), (4), or (5):

(1) The process wastewater feed rate;

(2) The steam feed rate; and
(3) The process wastewater column feed temperature.

(h) As an option to the requirements specified in paragraph (g) of this section, a CMS shall be operated to measure the methanol outlet concentration to comply with the steam stripper outlet concentration requirement specified in 40 CFR 63.446(e)(4) or (e)(5).

(i) A CMS shall be operated to measure the appropriate parameters determined according to the procedures specified in paragraph (n) of this section to comply with the condensate applicability requirements specified in 40 CFR 63.446(c).

(j) Each owner or operator using a biological treatment system to comply with 40 CFR 63.446(e)(2) shall perform the following monitoring procedures.

(1) On a daily basis, monitor the following parameters for each biological treatment unit:
(i) Composite daily sample of outlet soluble BOD5 concentration to monitor for maximum daily and maximum monthly average;
(ii) Mixed liquor volatile suspended solids;
(iii) Horsepower of aerator unit(s);
(iv) Inlet liquid flow; and
(v) Liquid temperature.

(2) Obtain daily inlet and outlet liquid grab samples from each biological treatment unit to have HAP data available to perform quarterly percent reduction tests specified in paragraph (j)(2)(ii) of this section and the compliance percent reduction tests specified in paragraph (p)(1)(i) of this section. Perform the following procedures with the liquid samples:
(i) Store the samples for 5 days as specified in 40 CFR 63.457(n). The 5-day storage requirement is required since the soluble BOD5 test requires 5 days to obtain results. If the results of the soluble BOD5 test are outside of the range established during the initial performance test, then the archive sample shall be used to perform the percent reduction test specified in 40 CFR 63.457(1).
(ii) Perform the percent reduction test procedures specified in 40 CFR 63.457(l) within 45 days after the beginning of each quarter as follows.
(A) The percent reduction test performed in the first quarter (annually) shall be performed for total HAP and the percent reduction obtained from the test shall be at least as great as the total HAP reduction specified in 40 CFR 63.446(e)(2).
(B) The remaining quarterly percent reduction tests shall be performed for methanol and the percent reduction obtained from the test shall be at least as great as the methanol reduction determined in the previous first-quarter test specified in paragraph (j)(2)(ii)(A) of this section.
(C) The parameter values used to calculate the percent reductions required in paragraphs (j)(2)(ii)(A) and (j)(2)(ii)(B) of this section shall be parameter values measured and samples taken in paragraph (j)(1) of this section.

(k) Each enclosure and closed-vent system used to comply with 40 CFR 63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.

(1) For each enclosure opening, a visual inspection of the closure mechanism specified in 40 CFR 63.450(b) shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.

(2) Each closed-vent system required by 40 CFR 63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

(3) For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in 40 CFR 63.450(c) measured initially and annually by the procedures in 40 CFR 63.457(d).
(4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 40 CFR 63.457(e).
(5) The valve or closure mechanism specified in 40 CFR 63.450(d)(2) shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.
(6) If an inspection required by paragraphs (k)(1) through (k)(5) of this section identifies visible defects in ductwork, piping, enclosures or connections to covers required by 40 CFR 63.450, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable.
(i) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.
(ii) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.

(l) Each pulping process condensate closed collection system used to comply with 40 CFR 63.446(d) shall be visually inspected every 30 days and shall comply with the inspection and monitoring requirements specified in 40 CFR 63.964 of Subpart RR of this part, except for the closed-vent system and control device inspection and monitoring requirements specified in 40 CFR 63.964(a)(2) of Subpart RR of this part, the closed-vent system and the control device shall meet the requirements specified in paragraphs (a) and (k) of this section.
(m) Each owner or operator using a control device, technique or an alternative parameter other than those specified in paragraphs (b) through (l) of this section shall install a CMS and establish appropriate operating parameters to be monitored that demonstrate, to the Administrator's satisfaction, continuous compliance with the applicable control requirements.
(n) To establish or reestablish, the value for each operating parameter required to be monitored under paragraphs (b) through (j), (l), and (m) of this section or to establish appropriate parameters for paragraphs (f), (i), and (m) of this section, each owner or operator shall use the following procedures:
(1) During the initial performance test required in 40 CFR 63.457(a) or any subsequent performance test, continuously record the operating parameter;
(2) Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer's recommendations;
(3) The owner or operator shall provide for the Administrator’s approval the rationale for selecting the monitoring parameters necessary to comply with paragraphs (f), (i), and (m) of this section; and
(4) Provide for the Administrator's approval the rationale for the selected operating parameter value, and monitoring frequency, and averaging time. Include all data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the applicable emission standard.

(o) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored under paragraphs (a) through (n) of this section and established under this subpart. Except as provided in paragraph (p) of this section, 40 CFR 63.443 (e), or 63.446 (g), operation of the control device below minimum operating parameter values or above maximum operating parameter values

established under this subpart or failure to perform procedures required by this subpart shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions.

(p) Each owner or operator of a biological treatment system complying with paragraph (j) of this section shall perform all the following requirements when the monitoring parameters specified in paragraphs (j)(1)(i) through (j)(1) (iii) of this section are below minimum operating parameter values or above maximum operating parameter values established in paragraph (n) of this section.

(1) The following shall occur and be recorded as soon as practical:

(i) Determine compliance with 40 CFR 63.446(e)(2) using the percent reduction test procedures specified in 40 CFR 63.457(l) and the monitoring data specified in paragraph (j)(1) of this section that coincide with the time period of the parameter excursion;

(ii) Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period; and

(iii) Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

(2) A parameter excursion is not a violation of the applicable emission standard if the percent reduction test specified in paragraph (p)(1)(i) of this section demonstrates compliance with 40 CFR 63.446(e)(2), and no maintenance or changes have been made to the process or control device after the beginning of a parameter excursion that would influence the results of the determination.

M.8. <u>40 CFR 63.454 - Recordkeeping Requirements</u>:

(a) The owner or operator of each affected source subject to the requirements of this subpart shall comply with the recordkeeping requirements of 40 CFR 63.10 of Subpart A of this part, as shown in Table 1, and the requirements specified in paragraphs (b) through (d) of this section for the monitoring parameters specified in 40 CFR 63.453.

(b) For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection:

(1) Date of inspection;

(2) The equipment type and identification;

(3) Results of negative pressure tests for enclosures;

(4) Results of leak detection tests;

(5) The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

(6) The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

(7) Repair methods applied in each attempt to repair the defect or leak;

(8) The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

(9) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

(10) The date of successful repair of the defect or leak;

(11) The position and duration of opening of bypass line valves and the condition of any valve seals; and

(12) The duration of the use of bypass valves on computer controlled valves.

(c) The owner or operator of a bleaching system complying paragraph 40 CFR 63.440(d)(3)(ii)(B) shall record the daily average chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system until the requirements specified in 40 CFR 63.440(d)(3)(ii)(A) are met.
(d) The owner or operator shall record the CMS parameters specified in 40 CFR 63.453 and meet the requirements specified in paragraph (a) of this section for any new affected process equipment or pulping process condensate stream that becomes subject to the standards in this subpart due to a process change or modification.

M.9. 40 CFR 63.455 - Reporting Requirements:
(a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of Subpart A of this part as specified in table 1 and all the following requirements in this section. The initial notification report specified under 40 CFR 63.9(b)(2) of Subpart A of this part shall be submitted by April 15, 1999.
(b) Each owner or operator of a kraft pulping system specified in 40 CFR 63.440(d)(1) or a bleaching system specified in 40 CFR 63.440(d)(3)(ii) shall submit, with the initial notification report specified under 40 CFR 63.9(b)(2) of Subpart A of this part and paragraph (a) of this section and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in paragraphs (b)(1) through (b)(3) of this section in addition to the information required in 40 CFR 63.9(b)(2) of Subpart A of this part.

(1) A description of the emission controls or process modifications selected for compliance with the control requirements in this standard.
(2) A compliance schedule, including the dates by which each step toward compliance will be reached for each emission point or sets of emission points. At a minimum, the list of dates shall include:

(i) The date by which the major study(s) for determining the compliance strategy will be completed;
(ii) The date by which contracts for emission controls or process modifications will be awarded, or the date by which orders will be issued for the purchase of major components to accomplish emission controls or process changes;
(iii) The date by which on-site construction, installation of emission control equipment, or a process change is to be initiated;
(iv) The date by which on-site construction, installation of emissions control equipment, or a process change is to be completed;
(v) The date by which final compliance is to be achieved;
(vi) For compliance with paragraph 40 CFR 63.440(d)(3)(ii), the tentative dates by which compliance with effluent limitation guidelines and standards intermediate pollutant load effluent reductions and as available, all the dates for the best available technology's milestones reported in the National Pollutant Discharge Elimination System authorized under section 402 of the Clean Water Act and for the best professional milestones in the Voluntary Advanced Technology Incentives Program under 40 CFR 430.24 (b)(2); and
(vii) The date by which the final compliance tests will be performed.

(3) Until compliance is achieved, revisions or updates shall be made to the control strategy report required by paragraph (b) of this section indicating the progress made towards completing the installation of the emission controls or process modifications during the 2-year period.

(c) The owner or operator of each bleaching system complying with 40 CFR 63.440(d)(3)(ii)(B) shall certify in the report specified under 40 CFR 63.10(e)(3) of Subpart A of this part that the daily application rates of chlorine and hypochlorite for that bleaching system have not increased

as specified in 40 CFR 63.440(d)(3)(ii)(B) until the requirements of 40 CFR 63.440(d)(3)(ii)(A) are met.
(d) The owner or operator shall meet the requirements specified in paragraph (a) of this section upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of this subpart due to a process change or modification.

M.10. 40 CFR 63.457 - Test methods and procedures:
(a) *Initial performance test*. An initial performance test is required for all emission sources subject to the limitations in 40 CFR 63.443, 63.444, 63.445, 63.446, and 63.447, except those controlled by a combustion device that is designed and operated as specified in 40 CFR 63.443(d)(3) or (d)(4).
(b) *Vent sampling port locations and gas stream properties*. For purposes of selecting vent sampling port locations and determining vent gas stream properties, required in 40 CFR 63.443, 63.444, 63.445, and 63.447, each owner or operator shall comply with the applicable procedures in paragraphs (b)(1) through (b)(6) of this section.

(1) Method 1 or 1A of 40 CFR 60 Appendix A, as appropriate, shall be used for selection of the sampling site as follows:

(i) To sample for vent gas concentrations and volumetric flow rates, the sampling site shall be located prior to dilution of the vent gas stream and prior to release to the atmosphere;
(ii) For determining compliance with percent reduction requirements, sampling sites shall be located prior to the inlet of the control device and at the outlet of the control device; measurements shall be performed simultaneously at the two sampling sites; and
(iii) For determining compliance with concentration limits or mass emission rate limits, the sampling site shall be located at the outlet of the control device.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter (4.0 inches) in diameter.
(3) The vent gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR 60 Appendix A, as appropriate.
(4) The moisture content of the vent gas shall be measured using Method 4 of 40 CFR 60 Appendix A.
(5) To determine vent gas concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using the following procedures.

(i) Method 308 in Appendix A of this part shall be used to determine the methanol concentration.
(ii) Except for the modifications specified in paragraphs (b)(5)(ii)(A) through (b)(5)(ii)(K) of this section, Method 26A of 40 CFR 60 Appendix A shall be used to determine chlorine concentration in the vent stream.

(A) *Probe/Sampling Line*. A separate probe is not required. The sampling line shall be an appropriate length of 0.64 cm (0.25 in) OD Teflon® tubing. The sample inlet end of the sampling line shall be inserted into the stack in such a way as to not entrain liquid condensation from the vent gases. The other end shall be connected to the impingers. The length of the tubing may vary from one sampling site to another, but shall be as short as possible in each situation. If sampling is conducted in sunlight, opaque tubing shall be used. Alternatively, if transparent tubing is used, it shall be covered with opaque tape.

(B) *Impinger Train*. Three 30-milliliter (ml) capacity midget impingers shall be connected in series to the sampling line. The impingers shall have regular tapered stems. Silica gel shall be placed in the third impinger as a desiccant. All impinger train connectors shall be glass and/or Teflon®.

(C) *Critical Orifice*. The critical orifice shall have a flow rate of 200 to 250 ml/min and shall be followed by a vacuum pump capable of providing a vacuum of 640 millimeters of mercury (mm Hg). A 45 millimeter diameter in-line Teflon® 0.8 micrometer filter shall follow the impingers to project the critical orifice and vacuum pump.

(D) The following are necessary for the analysis apparatus:

(*1*) Wash bottle filled with deionized water;
(*2*) 25 or 50 ml graduated burette and stand;
(*3*) Magnetic stirring apparatus and stir bar;
(*4*) Calibrated pH Meter;
(*5*) 150-250 ml beaker or flask; and
(*6*) A 5 ml pipette.

(E) The procedures listed in paragraphs (b)(5)(ii)(E)(*1*) through (b)(5)(ii)(E)(*7*) of this section shall be used to prepare the reagents.

(*1*) To prepare the 1 molarity (M) potassium dihydrogen phosphate solution, dissolve 13.61 grams (g) of potassium dihydrogen phosphate in water and dilute to 100 ml.

(*2*) To prepare the 1 M sodium hydroxide solution (NaOH), dissolve 4.0 g of sodium hydroxide in water and dilute to 100 ml.

(*3*) To prepare the buffered 2 percent potassium iodide solution, dissolve 20 g of potassium iodide in 900 ml water. Add 50 ml of the 1 M potassium dihydrogen phosphate solution and 30 ml of the 1 M sodium hydroxide solution. While stirring solution, measure the pH of solution electrometrically and add the 1 M sodium hydroxide solution to bring pH to between 6.95 and 7.05.

(*4*) To prepare the 0.1 normality (N) sodium thiosulfate solution, dissolve 25 g of sodium thiosulfate, pentahydrate, in 800 ml of freshly boiled and cooled distilled water in a 1-liter volumetric flask. Dilute to volume. To prepare the 0.01 N sodium thiosulfate solution, add 10.0 ml standardized 0.1 N sodium thiosulfate solution to a 100 ml volumetric flask, and dilute to volume with water.

(*5*) To standardize the 0.1 N sodium thiosulfate solution, dissolve 3.249 g of anhydrous potassium bi-iodate, primary standard quality, or 3.567 g potassium iodate dried at 103 +/- 2 degrees Centigrade for 1 hour, in distilled water and dilute to 1000 ml to yield a 0.1000 N solution. Store in a glass-stoppered bottle. To 80 ml distilled water, add, with constant stirring, 1 ml concentrated sulfuric acid, 10.00 ml 0.1000 N anhydrous potassium bi-iodate, and 1 g potassium iodide. Titrate immediately with 0.1 n sodium thiosulfate titrant until the yellow color of the liberated iodine is almost discharged. Add 1 ml starch indicator solution and continue titrating until the blue

color disappears. The normality of the sodium thiosulfate solution is inversely proportional to the ml of sodium thiosulfate solution consumed:

$$\text{Normality of Sodium Thiosulfate} = \frac{1}{\text{ml Sodium Thiosulfate Consumed}}$$

(*6*) To prepare the starch indicator solution, add a small amount of cold water to 5 g starch and grind in a mortar to obtain a thin paste. Pour paste into 1 L of boiling distilled water, stir, and let settle overnight. Use clear supernate for starch indicator solution.

(*7*) To prepare the 10 percent sulfuric acid solution, add 10 ml of concentrated sulfuric acid to 80 ml water in an 100 ml volumetric flask. Dilute to volume.

(F) The procedures specified in paragraphs (b)(5)(ii)(F)(*1*) through (b)(5)(ii)(F)(*5*) of this section shall be used to perform the sampling.

(*1*) Preparation of Collection Train. Measure 20 ml buffered potassium iodide solution into each of the first two impingers and connect probe, impingers, filter, critical orifice, and pump. The sampling line and the impingers shall be shielded from sunlight.

(*2*) Leak and Flow Check Procedure. Plug sampling line inlet tip and turn on pump. If a flow of bubbles is visible in either of the liquid impingers, tighten fittings and adjust connections and impingers. A leakage rate not in excess of 2 percent of the sampling rate is acceptable. Carefully remove the plug from the end of the probe. Check the flow rate at the probe inlet with a bubble tube flow meter. The flow should be comparable or slightly less than the flow rate of the critical orifice with the impingers off-line. Record the flow and turn off the pump.

(*3*) Sample Collection. Insert the sampling line into the stack and secure it with the tip slightly lower than the port height. Start the pump, recording the time. End the sampling after 60 minutes, or after yellow color is observed in the second in-line impinger. Record time and remove the tubing from the vent. Recheck flow rate at sampling line inlet and turn off pump. If the flow rate has changed significantly, redo sampling with fresh capture solution. A slight variation (less than 5 percent) in flow may be averaged. With the inlet end of the line elevated above the impingers, add about 5 ml water into the inlet tip to rinse the line into the first impinger.

(*4*) Sample Analysis. Fill the burette with 0.01 N sodium thiosulfate solution to the zero mark. Combine the contents of the impingers in the beaker or flask. Stir the solution and titrate with thiosulfate until the solution is colorless. Record the volume of the first endpoint (TN, ml). Add 5 ml of the 10 percent sulfuric acid solution, and continue the titration until the contents of the flask are again colorless. Record the total volume of titrant required to go through the first and to the

second endpoint (TA, ml). If the volume of neutral titer is less than 0.5 ml, repeat the testing for a longer period of time. It is important that sufficient lighting be present to clearly see the endpoints, which are determined when the solution turns from pale yellow to colorless. A lighted stirring plate and a white background are useful for this purpose.

(5) Interferences. Known interfering agents of this method are sulfur dioxide and hydrogen peroxide. Sulfur dioxide, which is used to reduce oxidant residuals in some bleaching systems, reduces formed iodine to iodide in the capture solution. It is therefore a negative interference for chlorine, and in some cases could result in erroneous negative chlorine concentrations. Any agent capable of reducing iodine to iodide could interfere in this manner. A chromium trioxide impregnated filter will capture sulfur dioxide and pass chlorine and chlorine dioxide. Hydrogen peroxide, which is commonly used as a bleaching agent in modern bleaching systems, reacts with iodide to form iodine and thus can cause a positive interference in the chlorine measurement. Due to the chemistry involved, the precision of the chlorine analysis will decrease as the ratio of chlorine dioxide to chlorine increases. Slightly negative calculated concentrations of chlorine may occur when sampling a vent gas with high concentrations of chlorine dioxide and very low concentrations of chlorine.

(G) The following calculation shall be performed to determine the corrected sampling flow rate:

$$S_C = S_U \frac{(BP - PW)(293)}{(760)(273 + t)}$$

where:
S_C = Corrected (dry standard) sampling flow rate, liters per minute;
S_U = Uncorrected sampling flow rate, L/min;
BP = Barometric pressure at time of sampling;
PW = Saturated partial pressure of water vapor, mm Hg at temperature; and
t = Ambient temperature, °C.

(H) The following calculation shall be performed to determine the moles of chlorine in the sample:

$$Cl_2 \text{ Moles} = 1/8000\ (5\ T_N - T_A) \times N_{Thio}$$

where:
T_N = Volume neutral titer, ml;
T_A = Volume acid titer (total), ml; and
N_{Thio} = Normality of sodium thiosulfate titrant.

(I) The following calculation shall be performed to determine the concentration of chlorine in the sample:

$$Cl_2 \text{ ppmv} = \frac{3005\,(5\,T_N - T_A) \times N_{Thio}}{S_C \times t_S}$$

where:
S_C = Corrected (dry standard) sampling flow rate, liters per minute;
t_S = Time sampled, minutes;
T_N = Volume neutral titer, ml;
T_A = Volume acid titer (total), ml; and
N_{Thio} = Normality of sodium thiosulfate titrant.

(J) The following calculation shall be performed to determine the moles of chlorine dioxide in the sample:

$$ClO_2 \text{ Moles} = 1/\,4000\,(T_A - T_N) \times N_{Thio}$$

where:
T_A = Volume acid titer (total), ml;
T_N = Volume neutral titer, ml; and
N_{Thio} = Normality of sodium thiosulfate titrant.

(K) The following calculation shall be performed to determine the concentration of chlorine dioxide in the sample:

$$ClO_2 \text{ ppmv} = \frac{6010(T_A - T_N) \times N_{Thio}}{S_C \times t_S}$$

where:
S_C = Corrected (dry standard) sampling flow rate, liters per minute;
t_S = Time sampled, minutes;
T_A = Volume acid titer (total), ml;
T_N = Volume neutral titer, ml; and
N_{Thio} = Normality of sodium thiosulfate titrant.

(iii) Any other method that measures the total HAP or methanol concentration that has been demonstrated to the Administrator's satisfaction.

(6) The minimum sampling time for each of the three runs per method shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(c) *Liquid sampling locations and properties*. For purposes of selecting liquid sampling locations and for determining properties of liquid streams such as wastewaters, process waters, and condensates required in 40 CFR 63.444, 63.446, and 63.447, the owner or operator shall comply with the following procedures:

(1) Samples shall be collected using the sampling procedures specified in Method 305 of 40 CFR 60 Appendix A;

(i) Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and

(ii) When sampling from an enclosed pipe is not feasible, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

(2) The volumetric flow rate of the entering and exiting liquid streams shall be determined using the inlet and outlet flow meters or other methods demonstrated to the Administrator's satisfaction. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements;

(3) To determine liquid stream total HAP or methanol concentrations, the owner or operator shall collect a minimum of three samples that are representative of normal conditions and average the resulting pollutant concentrations using one of the following:

(i) Method 305 in Appendix A of this part, adjusted using the following equation:

$$\bar{C} = \sum_{i=1}^{n} C_i / fm_i$$

where:

C = Pollutant concentration for the liquid stream, parts per million by weight.

C_i = Measured concentration of pollutant i in the liquid stream sample determined using Method 305, parts per million by weight.

fm_i = Pollutant-specific constant that adjusts concentration measured by Method 305 to actual liquid concentration; the fm for methanol is 0.85. Additional pollutant fm values can be found in Table 34, Subpart G of this part.

n = Number of individual pollutants, i, summed to calculate total HAP.

(ii) Any other method that measures total HAP concentration that has been demonstrated to the Administrator's satisfaction.

(4) To determine soluble BOD5 in the effluent stream from a biological treatment unit used to comply with 40 CFR 63.446(e)(2) and 63.453(j), the owner or operator shall use Method 405.1 of 40 CFR 136, with the following modifications:

(i) Filter the sample through the filter paper, into Erlenmeyer flask by applying a vacuum to the flask sidearm. Minimize the time for which vacuum is applied to prevent stripping of volatile organics from the sample. Replace filter paper as often as needed in order to maintain filter times of less than approximately 30 seconds per filter paper. No rinsing of sample container or filter bowl into the Erlenmeyer flask is allowed.

(ii) Perform Method 405.1 on the filtrate obtained in paragraph (c)(4) of this section. Dilution water shall be seeded with 1 milliliter of final effluent per liter of dilution water. Dilution ratios may require adjustment to reflect the lower oxygen demand of the filtered sample in comparison to the total BOD5. Three BOD bottles and different dilutions shall be used for each sample.

(d) *Detectable leak procedures*. To measure detectable leaks for closed-vent systems as specified in 40 CFR 63.450 or for pulping process wastewater collection systems as specified in 40 CFR 63.446(d)(2)(i), the owner or operator shall comply with the following:

(1) Method 21 of 40 CFR 60 Appendix A; and

(2) The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:

(i) Zero air (less than 10 parts per million by volume of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

(e) *Negative pressure procedures*. To demonstrate negative pressure at process equipment enclosure openings as specified in 40 CFR 63.450(b), the owner or operator shall use one of the following procedures:

(1) An anemometer to demonstrate flow into the enclosure opening;
(2) Measure the static pressure across the opening;
(3) Smoke tubes to demonstrate flow into the enclosure opening; or
(4) Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.

(f) *HAP concentration measurements*. For purposes of complying with the requirements in 40 CFR 63.443, 63.444, and 63.447, the owner or operator shall measure the total HAP concentration as one of the following:

(1) As the sum of all individual HAPs; or
(2) As methanol.

(g) *Condensate HAP concentration measurement*. For purposes of complying with the kraft pulping condensate requirements in 40 CFR 63.446, the owner or operator shall measure the total HAP concentration as methanol except for the purposes of complying with the initial performance test specified in 40 CFR 63.457(a) for 40 CFR 63.446(e)(2) and as specified in 40 CFR 63.453 (j)(2)(ii).

(h) *Bleaching HAP concentration measurement*. For purposes of complying with the bleaching system requirements in 40 CFR 63.445, the owner or operator shall measure the total HAP concentration as the sum of all individual chlorinated HAPs or as chlorine.

(i) *Vent gas stream calculations*. To demonstrate compliance with the mass emission rate, mass emission rate per megagram of ODP, and percent reduction requirements for vent gas streams specified in 40 CFR 63.443, 63.444, 63.445, and 63.447, the owner or operator shall use the following:

(1) The total HAP mass emission rate shall be calculated using the following equation:

$$E = K_2 \left(\sum_{j=1}^{n} C_j M_j\right) Q_s$$

where:

E = Mass emission rate of total HAP from the sampled vent, kilograms per hour.

K_2 = Constant, 2.494×10^{-6} (parts per million by volume)-1 (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20°C.

C_j = Concentration on a dry basis of pollutant j in parts per million by volume as measured by the test methods specified in paragraph (b) of this section.

M_j = Molecular weight of pollutant j, gram/gram-mole.

Q_s = Vent gas stream flow rate (dry standard cubic meter per minute) at a temperature of 20°C as indicated in paragraph (b) of this section.

n = Number of individual pollutants, i, summed to calculate total HAP.

(2) The total HAP mass emission rate per megagram of ODP shall be calculated using the following equation:

$$F = \frac{E}{P}$$

where:
F = Mass emission rate of total HAP from the sampled vent, in kilograms per megagram of ODP.
E = Mass emission rate of total HAP from the sampled vent, in kilograms per hour determined as specified in paragraph (i)(1) of this section.
P = The production rate of pulp during the sampling period, in megagrams of ODP per hour.

(3) The total HAP percent reduction shall be calculated using the following equation:

$$R = \frac{E_i - E_o\ (100)}{E_i}$$

where:
R = Efficiency of control device, percent.
E_i = Inlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.
E_o = Outlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

(j) *Liquid stream calculations*. To demonstrate compliance with the mass flow rate, mass per megagram of ODP, and percent reduction requirements for liquid streams specified in 40 CFR 63.446, the owner or operator shall use the following:

(1) The mass flow rates of total HAP or methanol entering and exiting the treatment process shall be calculated using the following equations:

$$E_b = \frac{K}{n \times 10^6} \left(\sum_{i=1}^{n} V_{bi}\, C_{bi}\right)$$

$$E_a = \frac{K}{n \times 10^6} \left(\sum_{i=1}^{n} V_{ai}\, C_{ai}\right)$$

where:
E_b = Mass flow rate of total HAP or methanol in the liquid stream entering the treatment process, kilograms per hour.
E_a = Mass flow rate of total HAP or methanol in the liquid exiting the treatment process, kilograms per hour.
K = Density of the liquid stream, kilograms per cubic meter.
V_{bi} = Volumetric flow rate of liquid stream entering the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.
V_{ai} = Volumetric flow rate of liquid stream exiting the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.
C_{bi} = Concentration of total HAP or methanol in the stream entering the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.
C_{ai} = Concentration of total HAP or methanol in the stream exiting the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.
n = Number of runs.

(2) The mass of total HAP or methanol per megagram ODP shall be calculated using the following equation:

$$F = \frac{E}{P}$$

where:
F = Mass loading of total HAP or methanol in the sample, in kilograms per megagram of ODP.
E = Mass flow rate of total HAP or methanol in the wastewater stream in kilograms per hour as determined using the procedures in paragraph (j)(1) of this section.
P = The production rate of pulp during the sampling period in megagrams of ODP per hour.

(3) The percent reduction of total HAP across the applicable treatment process shall be calculated using the following equation:

$$R = \frac{E_b - E_a}{E_b}(100)$$

where:
R = Control efficiency of the treatment process, percent.
E_b = Mass flow rate of total HAP in the stream entering the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.
E_a = Mass flow rate of total HAP in the stream exiting the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

(4) Compounds that meet the requirements specified in paragraphs (j)(4)(i) or (4)(ii) of this section are not required to be included in the mass flow rate, mass per megagram of ODP, or the mass percent reduction determinations.

(i) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(ii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight.

(k) *Oxygen concentration correction procedures*. To demonstrate compliance with the total HAP concentration limit of 20 ppmv in 40 CFR 63.443(d)(2), the concentration measured using the methods specified in paragraph (b)(5) of this section shall be corrected to 10 percent oxygen using the following procedures:

(1) The emission rate correction factor and excess air integrated sampling and analysis procedures of Methods 3A or 3B of 40 CFR 60 Appendix A shall be used to determine the oxygen concentration. The samples shall be taken at the same time that the HAP samples are taken.

(2) The concentration corrected to 10 percent oxygen shall be computed using the following equation:

$$C_c = C_m \left(\frac{10.9}{(20.9 - \% O_{2d})} \right)$$

where:
C_c = Concentration of total HAP corrected to 10 percent oxygen, dry basis, parts per million by volume.
C_m = Concentration of total HAP dry basis, parts per million by volume, as specified in paragraph (b) of this section.

% 0_{2d} = Concentration of oxygen, dry basis, percent by volume.

(l) *Biological treatment system percent reduction calculation*. To determine compliance with an open biological treatment system option specified in 40 CFR 63.446(e)(2) and the monitoring requirements specified in 40 CFR 63.453(j)(2), the percent reduction due to destruction in the biological treatment system shall be calculated using the following equation:

$R = f_{bio} \times 100$

where:
R = Destruction of total HAP or methanol in the biological treatment process, percent.
f_{bio} = The fraction of total HAP or methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the procedures specified and as limited in Appendix C of 40 CFR 63.

(m) *Condensate segregation procedures*. The following procedures shall be used to demonstrate compliance with the condensate segregation requirements specified in 40 CFR 63.446(c).

(1) To demonstrate compliance with the percent mass requirements specified in 40 CFR 63.446(c)(1), the procedures specified in paragraphs (m)(1)(i) through (1)(iii) of this section shall be performed.

(i) Determine the total HAP mass of all condensates from each equipment system listed in 40 CFR 63.446(b)(1) through (b)(3) using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Multiply the total HAP mass determine in paragraph (m)(1)(i) of this section by 0.65 to determine the target HAP mass for the high-HAP fraction condensate stream or streams.

(iii) Compliance with the segregation requirements specified in 40 CFR 63.446(c)(1) is demonstrated if the condensate stream or streams from each equipment system listed in 40 CFR 63.446(b)(1) through (b)(3) being treated as specified in 40 CFR 63.446(e) contain at least as much total HAP mass as the target total HAP mass determined in paragraph (m)(1)(ii) of this section.

(2) To demonstrate compliance with the percent mass requirements specified in 40 CFR 63.446(c)(2), the procedures specified in paragraphs (m)(2)(i) through (2)(ii) of this section shall be performed.

(i) Determine the total HAP mass contained in the high-HAP fraction condensates from each equipment system listed in 40 CFR 63.446(b)(1) through (b)(3) and the total condensates streams from the equipment systems listed in 40 CFR 63.446(b)(4) and (b)(5), using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Compliance with the segregation requirements specified in 40 CFR 63.446(c)(2) is demonstrated if the total HAP mass determined in paragraph (m)(2)(i) of this section is equal to or greater than the appropriate mass requirements specified in 40 CFR 63.446(c)(2).

(n) *Biological treatment system monitoring sampling storage*. The inlet and outlet grab samples required to be collected in 40 CFR 63.453(j)(2) shall be stored at 4° C (40° F) to minimize the biodegradation of the organic compounds in the samples.

Method 308 - Procedure for Determination of Methanol Emission from Stationary Sources

1.0 *Scope and Application*.

1.1 Analyte. Methanol. Chemical Abstract Service (CAS) No. 67-56-1.

1.2 Applicability. This method applies to the measurement of methanol emissions from specified stationary sources.

2.0 *Summary of Method.* A gas sample is extracted from the sampling point in the stack. The methanol is collected in deionized distilled water and adsorbed on silica gel. The sample is returned to the laboratory where the methanol in the water fraction is separated from other organic compounds with a gas chromatograph (GC) and is then measured by a flame ionization detector (FID). The fraction adsorbed on silica gel is extracted with an aqueous solution of n-propanol and is then separated and measured by GC/FID.

3.0 *Definitions*. [Reserved]

4.0 *Interferences*. [Reserved]

5.0 *Safety*.

5.1 Disclaimer. This method may involve hazardous materials, operations, and equipment. This test method does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this test method to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before performing this test method.

5.2 Methanol Characteristics. Methanol is flammable and a dangerous fire and explosion risk. It is moderately toxic by ingestion and inhalation.

6.0 *Equipment and Supplies*.

6.1 Sample Collection. The following items are required for sample collection:

6.1.1 Sampling Train. The sampling train is shown in Figure 308-1 and component parts are discussed below.

6.1.1.1 Probe. Teflon®, approximately 6-millimeter (mm) (0.24 inch) outside diameter.

6.1.1.2 Impinger. A 30-milliliter (ml) midget impinger. The impinger must be connected with leak-free glass connectors. Silicone grease may not be used to lubricate the connectors.

6.1.1.3 Adsorbent Tube. Glass tubes packed with the required amount of the specified adsorbent.

6.1.1.4 Valve. Needle valve, to regulate sample gas flow rate.

6.1.1.5 Pump. Leak-free diaphragm pump, or equivalent, to pull gas through the sampling train. Install a small surge tank between the pump and rate meter to eliminate the pulsation effect of the diaphragm pump on the rotameter.

6.1.1.6 Rate Meter. Rotameter, or equivalent, capable of measuring flow rate to within 2 percent of the selected flow rate of up to 1000 milliliter per minute (ml/min). Alternatively, the tester may use a critical orifice to set the flow rate.

6.1.1.7 Volume Meter. Dry gas meter (DGM), sufficiently accurate to measure the sample volume to within 2 percent, calibrated at the selected flow rate and conditions actually encountered during sampling, and equipped with a temperature sensor (dial thermometer, or equivalent) capable of measuring temperature accurately to within 3 C (5.4 F).

6.1.1.8 Barometer. Mercury (Hg), aneroid, or other barometer capable of measuring atmospheric pressure to within 2.5 mm (0.1 inch) Hg. See the NOTE in Method 5 (40 CFR 60 Appendix A), section 6.1.2.

6.1.1.9 Vacuum Gauge and Rotameter. At least 760-mm (30-inch) Hg gauge and 0- to 40-ml/min rotameter, to be used for leak-check of the sampling train.

6.2 Sample Recovery. The following items are required for sample recovery:

6.2.1 Wash Bottles. Polyethylene or glass, 500-ml, two.

6.2.2 Sample Vials. Glass, 40-ml, with Teflon®-lined septa, to store impinger samples (one per sample).

6.2.3 Graduated Cylinder. 100-ml size.

6.3 Analysis. The following are required for analysis:

6.3.1 Gas Chromatograph. GC with an FID, programmable temperature control, and heated liquid injection port.

6.3.2 Pump. Capable of pumping 100 ml/min. For flushing sample loop.

6.3.3 Flow Meter. To monitor accurately sample loop flow rate of 100 ml/min.

6.3.4 Regulators. Two-stage regulators used on gas cylinders for GC and for cylinder standards.

6.3.5 Recorder. To record, integrate, and store chromatograms.

6.3.6 Syringes. 1.0- and 10-microliter (l) size, calibrated, for injecting samples.

6.3.7 Tubing Fittings. Stainless steel, to plumb GC and gas cylinders.

6.3.8 Vials. Two 5.0-ml glass vials with screw caps fitted with Teflon®-lined septa for each sample.

6.3.9 Pipettes. Volumetric type, assorted sizes for preparing calibration standards.

6.3.10 Volumetric Flasks. Assorted sizes for preparing calibration standards.

6.3.11 Vials. Glass 40-ml with Teflon®-lined septa, to store calibration standards (one per standard).

7.0 *Reagents and Standards.*

NOTE: Unless otherwise indicated, all reagents must conform to the specifications established by the Committee on Analytical Reagents of the American Chemical Society. Where such specifications are not available, use the best available grade.

7.1 Sampling. The following are required for sampling:

7.1.1 Water. Deionized distilled to conform to the American Society for Testing and Materials (ASTM) Specification D 1193-77, Type 3. At the option of the analyst, the potassium permanganate (KMnO4) test for oxidizable organic matter may be omitted when high concentrations of organic matter are not expected to be present.

7.1.2 Silica Gel. Deactivated chromatographic grade 20/40 mesh silica gel packed in glass adsorbent tubes. The silica gel is packed in two sections. The front section contains 520 milligrams (mg) of silica gel, and the back section contains 260 mg.

7.2 Analysis. The following are required for analysis:

7.2.1 Water. Same as specified in section 7.1.1.

7.2.2 n-Propanol, 3 Percent. Mix 3 ml of n-propanol with 97 ml of water.

7.2.3 Methanol Stock Standard. Prepare a methanol stock standard by weighing 1 gram of methanol into a 100-ml volumetric flask. Dilute to 100 ml with water.

7.2.3.1 Methanol Working Standard. Prepare a methanol working standard by pipetting 1 ml of the methanol stock standard into a 100-ml volumetric flask. Dilute the solution to 100 ml with water.

7.2.3.2 Methanol Standards For Impinger Samples. Prepare a series of methanol standards by pipetting 1, 2, 5, 10, and 25 ml of methanol working standard solution respectively into five 50-ml volumetric flasks. Dilute the solutions to 50 ml with water. These standards will have 2, 4, 10, 20, and 50 µg/ml of methanol, respectively. After preparation, transfer the solutions to 40-ml glass vials capped with Teflon® septa and store the vials under refrigeration. Discard any excess solution.

7.2.3.3 Methanol Standards for Adsorbent Tube Samples. Prepare a series of methanol standards by first pipetting 10 ml of the methanol working standard into a 100-ml volumetric flask and diluting the contents to exactly 100 ml with 3 percent n-propanol solution. This standard will contain 10 µg/ml of methanol. Pipette 5, 15, and 25 ml of this standard, respectively, into four 50-ml volumetric flasks. Dilute each solution to 50 ml with 3 percent n-propanol solution. These standards will have 1, 3, and 5 µg/ml of methanol, respectively.

Transfer all four standards into 40-ml glass vials capped with Teflon®-lined septa and store under refrigeration. Discard any excess solution.

7.2.4 GC Column. Capillary column, 30 meters (100 feet) long with an inside diameter (ID) of 0.53 mm (0.02 inch), coated with DB 624 to a film thickness of 3.0 micrometers, (µm) or an equivalent column. Alternatively, a 30-meter capillary column coated with polyethylene glycol to a film thickness of 1 µm such as AT-WAX or its equivalent.

7.2.5 Helium. Ultra high purity.

7.2.6 Hydrogen. Zero grade.

7.2.7 Oxygen. Zero grade.

8.0 *Procedure.*

8.1 Sampling. The following items are required for sampling:

8.1.1 Preparation of Collection Train. Measure 20 ml of water into the midget impinger. The adsorbent tube must contain 520 mg of silica gel in the front section and 260 mg of silica gel in the backup section. Assemble the train as shown in Figure 308-1. An optional, second impinger that is left empty may be placed in front of the water-containing impinger to act as a condensate trap. Place crushed ice and water around the impinger.

8.1.2 Leak Check. A leak check prior to the sampling run is optional; however, a leak check after the sampling run is mandatory. The leak-check procedure is as follows:

Temporarily attach a suitable (e.g., 0- to 40-ml/min) rotameter to the outlet of the DGM, and place a vacuum gauge at or near the probe inlet. Plug the probe inlet, pull a vacuum of at least 250 mm (10 inch) Hg, and note the flow rate as indicated by the rotameter. A leakage rate not in excess of 2 percent of the average sampling rate is acceptable.

NOTE: Carefully release the probe inlet plug before turning off the pump.

8.1.3 Sample Collection. Record the initial DGM reading and barometric pressure. To begin sampling, position the tip of the Teflon® tubing at the sampling point, connect the tubing to the impinger, and start the pump. Adjust the sample flow to a constant rate between 200 and 1000 ml/min as indicated by the rotameter. Maintain this constant rate (± 10 percent) during the entire sampling run. Take readings (DGM, temperatures at DGM and at impinger outlet, and rate meter) at least every 5 minutes. Add more ice during the run to keep the temperature of the gases leaving the last impinger at 20 C (68 F) or less. At the conclusion of each run, turn off the pump, remove the Teflon® tubing from the stack, and record the final readings. Conduct a leak check as in section 8.1.2. (This leak check is mandatory.) If a leak is found, void the test run or use procedures acceptable to the Administrator to adjust the sample volume for the leakage.

8.2 Sample Recovery. The following items are required for sample recovery:

8.2.1 Impinger. Disconnect the impinger. Pour the contents of the midget impinger into a graduated cylinder. Rinse the midget impinger and the connecting tubes with water, and add the rinses to the graduated cylinder. Record the sample volume. Transfer the sample to a glass vial and cap with a Teflon® septum. Discard any excess sample. Place the samples in an ice chest for shipment to the laboratory.

8.2.2. Adsorbent Tubes. Seal the silica gel adsorbent tubes and place them in an ice chest for shipment to the laboratory.

9.0 *Quality Control*.

9.1 Miscellaneous Quality Control Measures. The following quality control measures are required:

Figure 308.1. Sampling train schematic

Section	Quality control measure	Effect
8.1.2, 8.1.3, 10.1	Sampling equipment leak check and calibration	Ensures accurate measurement of sample volume
10.2	GC calibration	Ensures precision of GC analysis

9.2 Applicability. When the method is used to analyze samples to demonstrate compliance with a source emission regulation, an audit sample must be analyzed, subject to availability.

9.3 Audit Procedure. Analyze an audit sample with each set of compliance samples. Concurrently analyze the audit sample and a set of compliance samples in the same manner to evaluate the technique of the analyst and the standards preparation. The same analyst, analytical reagents, and analytical system shall be used both for the compliance samples and the EPA audit sample.

9.4 Audit Sample Availability. Audit samples will be supplied only to enforcement agencies for compliance tests. Audit samples may be obtained by writing:

Source Test Audit Coordinator (MD-77B)
Air Measurement Research Division
National Exposure Research Laboratory
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

or by calling the Source Test Audit Coordinator (STAC) at (919) 541-7834. The audit sample request must be made at least 30 days prior to the scheduled compliance sample analysis.

9.5 Audit Results. Calculate the audit sample concentration according to the calculation procedure provided in the audit instructions included with the audit sample. Fill in the audit sample concentration and the analyst's name on the audit response form included with the audit instructions. Send one copy to the EPA Regional Office or the appropriate enforcement agency and a second copy to the STAC. The EPA Regional office or the appropriate enforcement agency will report the results of the audit to the laboratory being audited. Include this response with the results of the compliance samples in relevant reports to the EPA Regional Office or the appropriate enforcement agency.

10.0 *Calibration and Standardization*.

10.1 Metering System. The following items are required for the metering system:

10.1.1 Initial Calibration.

10.1.1.1 Before its initial use in the field, first leak-check the metering system (drying tube, needle valve, pump, rotameter, and DGM) as follows: Place a vacuum gauge at the inlet to the drying tube, and pull a vacuum of 250 mm (10 inch) Hg; plug or pinch off the outlet of the flow meter, and then turn off the pump. The vacuum shall remain stable for at least 30 seconds. Carefully release the vacuum gauge before releasing the flow meter end.

10.1.1.2 Next, remove the drying tube, and calibrate the metering system (at the sampling flow rate specified by the method) as follows: Connect an appropriately sized wet test meter (e.g., 1 liter per revolution (0.035 cubic feet per revolution)) to the inlet of the drying tube. Make three independent calibrations runs, using at least five revolutions of the DGM per run. Calculate the calibration factor, Y (wet test meter calibration volume divided by the DGM volume, both volumes adjusted to the same reference temperature and pressure), for each run, and average the results. If any Y-value deviates by more than 2 percent from the average, the metering system is unacceptable for use. Otherwise, use the average as the calibration factor for subsequent test runs.

10.1.2 Posttest Calibration Check. After each field test series, conduct a calibration check as in section 10.1.1 above, except for the following variations: (a) the leak check is not to be conducted, (b) three, or more revolutions of the DGM may be used, and (c) only two independent runs need be made. If the calibration factor does not deviate by more than 5 percent from the initial calibration factor (determined in section 10.1.1), then the DGM volumes obtained during the test series are acceptable. If the calibration factor deviates by more than 5 percent, recalibrate the metering system as in section 10.1.1, and for the calculations, use the calibration factor (initial or recalibration) that yields the lower gas volume for each test run.

10.1.3 Temperature Sensors. Calibrate against mercury-in-glass thermometers.

10.1.4 Rotameter. The rotameter need not be calibrated, but should be cleaned and maintained according to the manufacturer's instruction.

10.1.5 Barometer. Calibrate against a mercury barometer.

10.2 Gas Chromatograph. The following procedures are required for the gas chromatograph:

10.2.1 Initial Calibration. Inject 1 µl of each of the standards prepared in sections 7.2.3.3 and 7.2.3.4 into the GC and record the response. Repeat the injections for each standard until two successive injections agree within 5 percent. Using the mean response for each calibration standard, prepare a linear least squares equation relating the response to the mass of methanol in the sample. Perform the calibration before analyzing each set of samples.

10.2.2 Continuing Calibration. At the beginning of each day, analyze the mid level calibration standard as described in section 10.5.1. The response from the daily analysis must agree with the response from the initial calibration within 10 percent. If it does not, the initial calibration must be repeated.

11.0 *Analytical Procedure*.

11.1 Gas Chromatograph Operating Conditions. The following operating conditions are required for the GC:

11.1.1 Injector. Configured for capillary column, splitless, 200° C (392° F).

11.1.2 Carrier. Helium at 10 ml/min.

11.1.3 Oven. Initially at 45° C for 3 minutes; then raise by 10° C to 70° C; then raise by 70° C/min to 200° C.

11.2 Impinger Sample. Inject 1 µl of the stored sample into the GC. Repeat the injection and average the results. If the sample response is above that of the highest calibration standard, either dilute the sample until it is in the measurement range of the calibration line or prepare additional calibration standards. If the sample response is below that of the lowest calibration standard, prepare additional calibration standards. If additional calibration standards are prepared, there shall be at least two that bracket the response of the sample. These standards should produce approximately 50 percent and 150 percent of the response of the sample.

11.3 Silica Gel Adsorbent Sample. The following items are required for the silica gel adsorbent samples:

11.3.1 Preparation of Samples. Extract the front and backup sections of the adsorbent tube separately. With a file, score the glass adsorbent tube in front of the first section of silica gel. Break the tube open. Remove and discard the glass wool. Transfer the first section of the silica gel to a 5-ml glass vial and stopper the vial. Remove the spacer between the first and second section of the adsorbent tube and discard it. Transfer the second section of silica gel to a separate 5-ml glass vial and stopper the vial.

11.3.2 Desorption of Samples. Add 3 ml of the 10 percent n-propanol solution to each of the stoppered vials and shake or vibrate the vials for 30 minutes.

11.3.3 Inject a 1-µl aliquot of the diluted sample from each vial into the GC. Repeat the injection and average the results. If the sample response is above that of the highest calibration standard, either dilute the sample until it is in the measurement range of the calibration line or

prepare additional calibration standards. If the sample response is below that of the lowest calibration standard, prepare additional calibration standards. If additional calibration standards are prepared, there shall be at least two that bracket the response of the sample. These standards should produce approximately 50 percent and 150 percent of the response of the sample.

12.0 *Data Analysis and Calculations.*

12.1 Nomenclature.

C_{af} = Concentration of methanol in the front of the adsorbent tube, µg/ml.
C_{ab} = Concentration of methanol in the back of the adsorbent tube, µg/ml.
C_i = Concentration of methanol in the impinger portion of the sample train, µg/ml.
E = Mass emission rate of methanol, µg/hr (lb/hr).
M_{tot} = Total mass of methanol collected in the sample train, µg.
P_{bar} = Barometric pressure at the exit orifice of the DGM, mm Hg (in. Hg).
P_{std} = Standard absolute pressure, 760 mm Hg (29.92 in. Hg).
Q_{std} = Dry volumetric stack gas flow rate corrected to standard conditions, dscm/hr (dscf/hr).
T_m = Average DGM absolute temperature, degrees K (^oR).
T_{std} = Standard absolute temperature, 293 degrees K (528 R).
V_{af} = Volume of front half adsorbent sample, ml.
V_{ab} = Volume of back half adsorbent sample, ml.
V_i = Volume of impinger sample, ml.
V_m = Dry gas volume as measured by the DGM, dry cubic meters (dcm), dry cubic feet (dcf).
$V_{m(std)}$ = Dry gas volume measured by the DGM, corrected to standard conditions, dry standard cubic meters (dscm), dry standard cubic feet (dscf).

12.2 Mass of Methanol. Calculate the total mass of methanol collected in the sampling train using Equation 308-1.

$$M_{tot} = V_iC_i + V_{af}C_{af} + V_{ab}C_{ab} \qquad \text{Equation 308-1}$$

12.3 Dry Sample Gas Volume, Corrected to Standard Conditions. Calculate the volume of gas sampled at standard conditions using Equation 308-2.

$$V_{m(std)} = \frac{V_m Y T_{std} P_{bar}}{T_m P_{std}} \qquad \text{Equation 308-2}$$

12.4 Mass Emission Rate of Methanol. Calculate the mass emission rate of methanol using Equation 308-3.

$$E = \frac{M_{tot} Q_{sd}}{V_{m(std)}} \qquad \text{Equation 308-3}$$

13.0 *Method Performance*. [Reserved]
14.0 *Pollution Prevention*. [Reserved]
15.0 *Waste Management*. [Reserved]
16.0 *Bibliography*.

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17.0 *Tables, Diagrams, Flowcharts, and Validation Data*. [Reserved]

M.11. 40 CFR 63 Subpart MM - Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills:

40 CFR 63.860 - Applicability and designation of affected source:
The requirements of the General Provisions in Subpart A of this part that apply to the owner or operator subject to the requirements of this subpart are identified in Table 1 to this subpart.

40 CFR 63.864 - Monitoring requirements:
(a)-(c) [Reserved]
(d) Continuous opacity monitoring system (COMS). The owner or operator of each affected kraft or soda recovery furnace or lime kiln equipped with an ESP must install, calibrate, maintain, and operate a COMS according to the provisions in 40 CFR 63.6(h) and 63.8 and paragraphs (d)(1) through (4) of this section.

(1) [Reserved]

(2) [Reserved]

(3) As specified in 40 CFR 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in 40 CFR 63.8(g)(2).

(e) Continuous parameter monitoring system (CPMS). For each CPMS required in this section, the owner or operator of each affected source or process unit must meet the requirements in paragraphs (e)(1) through (14) of this section.

(1)-(9) [Reserved]

(10) The owner or operator of each affected kraft or soda recovery furnace, kraft or soda lime kiln, sulfite combustion unit, or kraft or soda smelt dissolving tank equipped with a wet scrubber must install, calibrate, maintain, and operate a CPMS that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period using the procedures in 40 CFR 63.8(c), as well as the procedures in paragraphs (e)(10)(i) and (ii) of this section:

(i) The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gage pressure of +/- 500 pascals (+/- 2 inches of water gage pressure); and

(ii) The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within +/- 5 percent of the design scrubbing liquid flow rate.

(11) [Not Applicable]

(12) [Not Applicable]

(13) The owner or operator of each affected source or process unit that uses an ESP, wet scrubber, RTO, or fabric filter may monitor alternative control device operating parameters subject to prior written approval by the Administrator.

(14) [Not Applicable]

(f) [Reserved]

(g) [Not Applicable]

(h)-(i) [Reserved]

(j) Determination of operating ranges. [Completed]

(k) On-going compliance provisions.

(1) Following the compliance date, owners or operators of all affected sources or process units are required to implement corrective action, as specified in the startup, shutdown, and malfunction plan prepared under 40 CFR 63.866(a) if the monitoring exceedances in paragraphs (k)(1)(i) through (vi) of this section occur:

(i) For a new or existing kraft or soda recovery furnace or lime kiln equipped with an ESP, when the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity;

(ii) For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, when any 3-hour average parameter value is outside the range of values established in paragraph (j) of this section.

(iii) [Not Applicable]

(iv) [Not Applicable]

(v) [Not Applicable]

(vi) [Not Applicable]

(2) Following the compliance date, owners or operators of all affected sources or process units are in violation of the standards of 40 CFR 63.862 if the monitoring exceedances in paragraphs (k)(2)(i) through (vii) of this section occur:

(i) For an existing kraft or soda recovery furnace equipped with an ESP, when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;

(ii) [Not Applicable]

(iii) For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in paragraph (j) of this section;

(iv) [Not Applicable]

(v) [Not Applicable]

(vi) For an affected source or process unit equipped with an ESP, wet scrubber, RTO, or fabric filter and monitoring alternative operating parameters established in paragraph (e)(13) of this section, when six or more 3-hour average values within any 6-month reporting period are outside the range of parameter values established in paragraph (j) of this section; and

(vii) [Not Applicable]

(3) For purposes of determining the number of nonopacity monitoring exceedances, no more than one exceedance will be attributed in any given 24-hour period.

40 CFR 63.866 - Recordkeeping requirements:

(a) *Startup, shutdown, and malfunction plan.* The owner or operator must develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and control systems used to comply with the standards. In addition to the information required in 40 CFR 63.6(e), the plan must include the requirements in paragraphs (a)(1) and (2) of this section.

(1) Procedures for responding to any process parameter level that is inconsistent with the level(s) established under 40 CFR 63.864(j), including the procedures in paragraphs (a)(1)(i) and (ii) of this section:

(i) Procedures to determine and record the cause of an operating parameter exceedance and the time the exceedance began and ended; and

(ii) Corrective actions to be taken in the event of an operating parameter exceedance, including procedures for recording the actions taken to correct the exceedance.

(2) The startup, shutdown, and malfunction plan also must include the schedules listed in paragraphs (a)(2)(i) and (ii) of this section:

(i) A maintenance schedule for each control technique that is consistent with, but not limited to, the manufacturer's instructions and recommendations for routine and long-term maintenance; and

(ii) An inspection schedule for each continuous monitoring system required under 40 CFR 63.864 to ensure, at least once in each 24-hour period, that each continuous monitoring system is properly functioning.

(b) The owner or operator of an affected source or process unit must maintain records of any occurrence when corrective action is required under 40 CFR 63.864(k)(1), and when a violation is noted under 40 CFR 63.864(k)(2).

(c) In addition to the general records required by 40 CFR 63.10(b)(2), the owner or operator must maintain records of the information in paragraphs (c)(1) through (7) of this section:

(1) Records of black liquor solids firing rates in units of Mg/d or ton/d for all recovery furnaces and semichemical combustion units;

(2) Records of CaO production rates in units of Mg/d or ton/d for all lime kilns;

(3) Records of parameter monitoring data required under 40 CFR 63.864, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;

(4) Records and documentation of supporting calculations for compliance determinations made under 40 CFR 63.865(a) through (d);

(5) Records of monitoring parameter ranges established for each affected source or process unit;

(6) Records certifying that an NDCE recovery furnace equipped with a dry ESP system is used to comply with the gaseous organic HAP standard in 40 CFR 63.862(c)(1).

(7) [Not Applicable]

40 CFR 63.867 - Reporting requirements:

(a) Notifications.

(1) The owner or operator of any affected source or process unit must submit the applicable notifications from Subpart A of this part.
(2) [Not Applicable]
(i) [Not Applicable]
(ii) [Not Applicable]
(3) [Not Applicable]

(b) *Additional reporting requirements for HAP metals standards.*
(1) Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in 40 CFR 63.862(a)(1)(ii) must submit the PM emissions limits determined in 40 CFR 63.865(a) for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln to the Administrator for approval. The emissions limits must be submitted as part of the notification of compliance status required under Subpart A of this part.
(2) Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in 40 CFR 63.862(a)(1)(ii) must submit the calculations and supporting documentation used in 40 CFR 63.865(a)(1) and (2) to the Administrator as part of the notification of compliance status required under Subpart A of this part.
(3) After the Administrator has approved the emissions limits for any process unit, the owner or operator of a process unit must notify the Administrator before any of the actions in paragraphs (b)(3)(i) through (iv) of this section are taken:
(i) The air pollution control system for any process unit is modified or replaced;
(ii) Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln in a chemical recovery system at a kraft or soda pulp mill complying with the PM emissions limits in 40 CFR 63.862(a)(1)(ii) is shut down for more than 60 consecutive days;
(iii) A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit is changed; or
(iv) The black liquor solids firing rate for any kraft or soda recovery furnace during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.
(4) An owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in 40 CFR 63.862(a)(1)(ii) and seeking to perform the actions in paragraph (b)(3)(i) or (ii) of this section must recalculate the overall PM emissions limit for the group of process units and resubmit the documentation required in paragraph (b)(2) of this section to the Administrator. All modified PM emissions limits are subject to approval by the Administrator.

(c) Excess emissions report. The owner or operator must report quarterly if measured parameters meet any of the conditions specified in paragraph (k)(1) or (2) of 40 CFR 63.864. This report must contain the information specified in 40 CFR 63.10(c) of this part as well as the number and duration of occurrences when the source met or exceeded the conditions in 40 CFR 63.864(k)(1), and the number and duration of occurrences when the source met or exceeded the conditions in 40 CFR 63.864(k)(2). Reporting excess emissions below the violation thresholds of 40 CFR 63.864(k) does not constitute a violation of the applicable standard.
(1) When no exceedances of parameters have occurred, the owner or operator must submit a semiannual report stating that no excess emissions occurred during the reporting period.
(2) The owner or operator of an affected source or process unit subject to the requirements of this subpart and Subpart S of this part may combine excess emissions and/or summary reports for the mill.

40 CFR 63.868 - Delegation of authority:
(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Clean Air Act, the authorities contained in paragraph (b) of this section must be retained by the Administrator and not transferred to a State.
(b) The authorities that will not be delegated to States are listed in paragraphs (b)(1) through (4) of this section:

(1) Approval of alternatives to standards in 40 CFR 63.862 under 40 CFR 63.6(g).
(2) Approval of major alternatives to test methods under 40 CFR 63.7(e)(2)(ii) and (f) and as defined in 40 CFR 63.90.
(3) Approval of major alternatives to monitoring under 40 CFR 63.8(f) and as defined in 40 CFR 63.90.
(4) Approval of major alternatives to recordkeeping and reporting under 40 CFR 63.10(f) and as defined in 40 CFR 63.90.

M.12. 40 CFR 60 Subpart BB - Standards of Performance for Kraft Pulp Mills

40 CFR 60.280 - Applicability and designation of affected facility:
(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.
(b) Except as noted in 40 CFR 60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.
[51 FR 18544, May 20, 1986]

40 CFR 60.281 - Definitions:
As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in Subpart A.
(a) - (m) N.A.
(n) *Lime kiln* means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.
(o) N.A.
[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18544, May 20, 1986; 65 FR 61758, Oct. 17, 2000]

40 CFR 60.282 - Standard for particulate matter:
(a) On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) - (2) N.A.
(3) From any lime kiln any gases which contain particulate matter in excess of:

(i) 0.15 g/dscm (0.066 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned.
(ii) 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

[43 FR 7572, Feb. 23, 1978, as amended at 65 FR 61758, Oct. 17, 2000]

40 CFR 60.283 - Standard for total reduced sulfur (TRS):
(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) - (4) N.A.

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen.

[43 FR 7572, Feb. 23, 1978, as amended at 50 FR 6317, Feb. 14, 1985; 51 FR 18544, May 20, 1986; 65 FR 61758, Oct. 17, 2000]

40 CFR 60.284 - Monitoring of emissions and operations:
(a) N.A.
(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) N.A.

(2) For any lime kiln or smelt dissolving tank using a scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ± 500 pascals (ca. ± 2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

(c) - (f) N.A.
[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18545, May 20, 1986; 65 FR 61759, Oct. 17, 2000; 71 FR 55127, Sept. 21, 2006]

40 CFR 60.285 - Test methods and procedures**:** N.A.