SC DEPARTMENT of ENVIRONMENTAL SERVICES

Bureau of Air Quality
State Construction Permit

New-Indy Catawba LLC
5300 Cureton Ferry Road
Catawba, South Carolina 29704
York County

In accordance with the provisions of the Pollution Control Act, Sections 48-1-50(5), 48-1-100(A), and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on March 23, 2023, as amended. All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

Permit Number: **CP-50000061 v1.1**
Agency Air Number: **2440-0005**

Issue Date: **July 22, 2024**

Steve McCaslin, P. E., Director
Air Permitting Division
Bureau of Air Quality

RECORD OF REVISIONS

Date	Description of Changes
02-05-2025	Condition B.25 is being revised to change the data collection period for routing existing LVHCs, but prior to routing new LVHC and SRL, to the No. 3 Recovery Furnace, from 90 days to 60 days. Condition B.38 is being revised to change the data substitution plan submittal from at least 90 days prior, to at least 45 days prior to initial startup.

A. PROJECT DESCRIPTION, EQUIPMENT, AND CONTROL DEVICE(S)

Revision 1:
This construction permit is being modified based on the construction modification request received on January 16, 2025. To avoid delaying the startup of the new stripper, the following changes have been made:

- In Condition B.25, the data collection time frame after existing LVHCs are routed to the No. 3 Recovery Furnace, but before routing new LVHC and SRL, will be changed from 90 days to 60 days.
- In Condition B.38, the time frame to submit the data substitution plan has been changed from at least 90 days prior, to at least 45 days prior to the initial startup of new sources or post-modification startup of existing sources.

Permission is hereby granted to construct and modify sources as follows:

New-Indy plans to add the following new equipment and make changes to existing treatment scenarios:

- Install a new low-pressure (LP) steam foul condensate stripper system. This LP stripper system will process the pulping process condensates (foul condensate) for compliance with 40 CFR 63, Subpart S. Approximately 98% of TRS compounds and 95% of methanol are expected to be removed from the foul condensate stream. Methanol will be condensed into a liquid (stripper rectified liquid (SRL)) from the stripper off gases and combusted along with the black liquor in the Nos. 2 and 3 Recovery Furnaces (ID Nos. 2505 and 5105). The SRL addition is limited to 2% by volume, which is representative of approximately 1% by volume pure methanol. No changes are anticipated in black liquor firing as a result of this project. The low volume, high concentration (LVHC) gases from the SRL condenser system, stripper feed tank, and SRL methanol tank will be combusted in the No. 3 Recovery Furnace. The LVHC system will include a 1.0 million Btu/hr natural gas ignitor for combustion of the LVHC gases when black liquor firing is less than 50% of capacity. The existing Nos. 1 and 2 Combination Boilers (ID Nos. 2605 and 3705) will serve as back-up control for the new LP Stripper's LVHC gases when the No. 3 Recovery Furnace cannot take the LVHC gases. These new LVHC gases will be collected in the existing LVHC Collection System and sent to the existing LVHC Scrubber before being combusted in either of the boilers. Stripped condensates will be recycled to the Brownstock washers (ID 5230), as needed. When the SRL condenser system is not in operation, the Nos. 1 and 2 Combination Boilers will combust the stripper off-gases (SOGs). The "cleaned" condensates will be recycled to the Brownstock Washers (ID 5230), as needed, or discharged to the wastewater treatment plant (WWTP).

- Operate the existing steam stripper (ID 9801) as a backup to the new low-pressure steam stripper. The existing steam stripper will be operated in one of two modes, as described below, to process the foul condensate and remove total reduced sulfur (TRS) compounds and methanol; and

- Modify the No. 3 Recovery Furnace to combust existing LVHC gases collected in the existing LVHC collection system. The Nos. 1 and 2 Combination Boilers will serve as backup control for the LVHC gases following this Project. When these LVHC gases are combusted in the combination boilers, a caustic scrubber will be operated to provide 50% removal of the sulfur prior to combustion.

The new LP Steam Stripper System (equipment ID 9803) includes: new 80,400 gallon Steam Stripper Feed Tank, new 850 gallons/minute Steam Stripper, 6.5 gallons/minute methanol condenser, and a new 1,300 gallon Stripper SRL Methanol Tank.

A. PROJECT DESCRIPTION, EQUIPMENT, AND CONTROL DEVICE(S)

The existing, backup Steam Stripper System includes: existing 40,000 gallon Foul Condensate Collection Tank (equipment ID 9800) and existing 850 gallons/minute Condensate Steam Stripper (equipment ID 9801).

The operation of foul condensate steam strippers is dependent on the pollutants to be removed. Currently, New-Indy operates the existing foul condensate steam stripper for the removal of methanol (methanol mode), for compliance with 40 CFR 63, Subpart S. In this operating mode, three control schemes are being used in parallel, where only a portion of the foul condensate is treated in the steam stripper, a maximum of approximately 350 gallons per minute (gpm), the remainder being treated in the aerated stabilization basin (ASB), and hydrogen peroxide (H_2O_2) is added prior to the hardpipe to chemically oxidize the hydrogen sulfide into either elemental sulfur or sulfate. New-Indy has actual testing and operating data of the existing steam stripper operating in the methanol removal mode.

Foul condensate steam strippers can also be operated for the removal of TRS compounds (TRS mode). In this operating mode the vendor has estimated the existing steam stripper could achieve approximately 98% TRS and 45% methanol removal efficiencies while treating the entirety of the foul condensate generated, up to a maximum of 850 gpm. New-Indy has limited trial data from operating in TRS mode. Preliminary data shows that treating 850 gpm can be sustained for a few hours. Testing of the existing stripper will be required to verify the removal efficiencies when operating in TRS mode. When operating in TRS mode, further methanol treatment through biological destruction will be accomplished by routing the stripped condensates to the existing hard pipe system that discharges the condensate below the liquid surface of the existing ASB. When operating in methanol mode, stripped condensates will be recycled to the Brownstock Washers (EU ID 02, equipment ID 5230), as needed, or discharged to the ASB via the sewer. The emission estimates are based on the maximum rates from either the TRS mode or Methanol mode.

> *[Note: In the current TV operating permit, the existing stripper is described as an 800 gallon/minute stripper. With this project, the capacity of the existing steam stripper will be shown as a maximum of 850 to 350 gallon per minute, depending on operating mode. Also, the facility relayed, via email on June 13, 2023, that the Foul Condensate Collection Tank (EU ID 09, equipment ID 9800) had been replaced. The replacement tank was installed in 2000 and has a 40,000 gallon capacity. The old tank was 180,000 gallons and was taken out of service in 2000. The capacity and installation date of this tank will be corrected in the TV operating permit when this construction permit is incorporated.]*

Other existing equipment involved in this project are: SOG Collection System (equipment ID 9820), LVHC Collection System (equipment ID 5260), LVHC System Caustic Scrubber (equipment ID 5260C), Nos. 2 and 3 Recovery Furnaces (equipment IDs 2505 and 5105), Nos. 1 and 2 Combination Boilers (equipment IDs 2605 and 3705), Aerated Stabilization Basin (ASB) (equipment ID 2901), Hard Pipe (equipment ID 9802), and associated control devices.

DETAILED DESCRIPTION

- High volume, low concentration (HVLC) gases are not impacted by the new stripper project and are not depicted in the scenarios outlined below. The HVLC gases will continue to be collected in the HVLC Collection System and combusted in one or the other of the Nos. 1 or 2 combination boilers. HVLC gases are not burned in both combination boilers at the same time.

- The chemical treatment of the foul condensates in the Hardpipe using a chemical oxidant [e.g. hydrogen peroxide

A. PROJECT DESCRIPTION, EQUIPMENT, AND CONTROL DEVICE(S)

(H_2O_2)] continuously operates, is operational during all scenarios described below and provides H_2O_2 if needed to maintain a rolling ninety-minute average oxidation reduction potential (ORP) reading above 0 millivolts (mV) before it is discharged to the ASB. It is only depicted in the scenarios where untreated foul condensate is sent to the ASB.

Scenario 1A - The new low pressure (LP) Steam Stripper System online, new LVHC gases to No. 3 Recovery Furnace
The new LP Steam Stripper System operates with the rectified methanol system operating. The rectified methanol (SRL) system will condense methanol from the new LP stripper's off-gases (SOGs). The condensed or rectified methanol is referred to as SRL, stripper rectified liquid. The SRL will be added to the black liquor up to a rate of approximately 2% by volume and burned with the black liquor in either Recovery Furnace.

When operating in SRL mode, a new exhaust stream of LVHC off-gases from the rectified methanol system will be vented into the existing LVHC Collection System and routed to the No. 3 Recovery Furnace for control. The new LVHC gases come from the SRL condenser system, stripper feed tank, and SRL methanol tank. The existing LVHC gas scrubber will not be used when the LVHC gases are being combusted in the No. 3 Recovery Furnace because the salt fume in the recovery furnace provides the expected sulfur control. The cleaned condensates will be recycled for use in the brownstock washers as needed or sent to the WWTP.

Scenario 1A: Primary control scenario – using the new LP Steam Stripper System and methanol condenser:

1A. New LP Stripper System with condenser emits LVHC gases and discharges Stripped Condensate

i. $\xrightarrow{SOG\ gases}$ new Methanol Condenser - emits liquid methanol and LVHC gases

1. $\xrightarrow{liquid\ Methanol}$ existing Recovery Furnace No. 2 or 3

2. $\xrightarrow{LVHC\ gases}$ existing Recovery Furnace No. 3

ii. $\xrightarrow{stripped\ condensates}$ recycled to the Brownstock Washers or sewered to WWTP

Scenario 1B - The new LP Steam Stripper online, SRL online, new LVHC gases to either No. 1 or No. 2 Combination Boiler
The new LP Steam Stripper will be operating with the rectified methanol system operating. The rectified methanol system will condense methanol from the new LP stripper's off-gases (SOGs). The condensed or rectified methanol is referred to as SRL. The SRL will be added to the black liquor up to a rate of 2% by volume and burned with the black liquor in either Recovery Furnace.

When the No. 3 Recovery Furnace cannot receive the LVHC gases, the LVHC from the new SRL condenser system will be combusted in either the No. 1 or No. 2 Combination Boiler. When the SRL condenser system is online, the LVHC gases will pass through the existing LVHC caustic scrubber prior to being combusted in either of the combination boilers. The LVHC scrubber removes approximately 50% of the sulfur from the gas stream. The stripped condensates will be recycled for use in the brownstock washers as needed or sent to the WWTP.

Scenario 1B: Backup control scenario to 1A - when the LVHC cannot be sent to Recovery Furnace No. 3, scenarios 1A.i.1. and 1A.ii. remain operational:

A. PROJECT DESCRIPTION, EQUIPMENT, AND CONTROL DEVICE(S)

1B. New LP Stripper System $\xrightarrow{SOG\ gases}$ existing Caustic Scrubber $\xrightarrow{LVHC\ gases}$ existing Combination Boiler Nos. 1 or 2

Scenario 1C - The new LP Steam Stripper online, SRL offline, new LVHC gases to either No. 1 or No. 2 Combination Boiler

The new LP Steam Stripper will be operating without the rectified methanol system operating. Under this scenario, the SOGs are collected in the existing SOG Collection System and sent to either of the existing Combination Boilers to combust the TRS stripped from the foul condensate. The cleaned condensate from the stripper will be collected and recycled to the Brownstock Washers as needed or sent to WWTP. The existing LVHC gases will continue to be sent to the existing LVHC scrubber then combusted in either of the existing Combination Boilers.

Scenario 1C: Backup control scenario to 1A and 1B - when the methanol condenser/SRL system is not operating, SOGs are combusted in either of the No. 1 or No. 2 Combination Boiler:

1C. New LP Stripper System, SRL is offline:

i. $\xrightarrow{SOG\ gases}$ existing Combination Boilers Nos. 1 or 2

ii. $\xrightarrow{cleaned\ condensates}$ recycled to the Brownstock Washers or sewered to WWTP

Scenario 2 - The existing (backup) Stripper online

The existing backup Stripper will operate when the new LP Steam Stripper System is offline. The existing backup Stripper can be operated in either A) Methanol mode where a maximum of approximately 350 gpm of foul condensate is treated in the stripper with the remaining foul condensate sent to the ASB for further methanol removal or B) TRS mode where it is estimated that 98% of the TRS and approximately 45% methanol can be removed from the foul condensate. The chemical treatment using H_2O_2 will continue to be used during either of these operating modes if needed. The SOGs from the stripper will be combusted in either of the existing Nos. 1 or 2 Combination Boilers. The existing LVHC gases will continue to be sent to the existing LVHC scrubber and on to either of the existing Combination Boilers for combustion.

Scenario 2A, Methanol Mode: New LP Steam Stripper is offline (not operating); Existing, backup steam stripper operating in methanol mode, no methanol condensing:

In this mode, a portion of the foul condensate is treated in the backup stripper for methanol removal. The stripped condensate is recycled to the Brownstock Washers (EU ID 02, Equipment ID 5230), as needed, or discharged to the ASB via the sewer. The remaining untreated foul condensate is treated with H_2O_2 to chemically oxidize the H_2S into either elemental sulfur or sulfate, then sent to the ASB via the hardpipe for further methanol treatment. This mode is also the current required operation of the existing, backup stripper prior to the installation of the new LP steam stripper.

2A. Backup Stripper System operating in methanol mode:

A. PROJECT DESCRIPTION, EQUIPMENT, AND CONTROL DEVICE(S)

i. $\xrightarrow{SOG\ gases}$ existing Combination Boiler Nos. 1 or 2

ii. $\xrightarrow{cleaned\ condensates}$ recycled to the Brownstock Washers or sewered to WWTP

iii. Foul condensate $\xrightarrow{hydrogen\ peroxide\ addition}$ hard piped to ASB, below the liquid surface level

Scenario 2B, TRS Mode: New LP Steam Stripper is offline (not operating); Existing, backup steam stripper operating in TRS mode:

All foul condensates are treated in the existing, backup stripper for TRS removal with a portion of methanol also being removed. The remaining methanol in the stripped condensates will be treated in the ASB. Although required to currently operate the existing stripper in methanol mode, this may be an operating scenario in the future.

2B. Backup Stripper System operating in TRS mode:

i. $\xrightarrow{SOG\ gases}$ existing Combination Boiler Nos. 1 or 2

ii. $\xrightarrow{stripped\ condensates}$ hard piped to ASB, below the liquid surface level

Scenario 3 - No Stripper online

When neither stripper is online, the foul condensate will be treated with hydrogen peroxide before being discharged to the ASB. This scenario is limited to 460 hours per year as required by the EPA's Consent Decree (Civil Case No. 0:21-cv-02053-SAL, *United States of America v. New-Indy Catawba, LLC, dated November 16, 2022)*.

Scenario 3: Backup control scenario to all scenarios above, no stripper is operating:

3. Foul condensates treated with hydrogen peroxide then discharged via the hard pipe below the liquid level to ASB.

i. Foul condensate $\xrightarrow{hydrogen\ peroxide\ addition}$ hard piped to ASB, below the liquid surface level

A.1 EQUIPMENT

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
9800	*Existing* - 40,000-gallon Foul Condensate Collection Tank (from NCG Systems)	2605, 3705	2610S1, 2610S2
9801	*Modify* – Backup Steam Stripper, 850 gallons/minute	9820, 2605, 3705, 2901	2610S1, 2610S2, Fugitive

A.1 EQUIPMENT

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
9820	*Existing* - Stripper Off Gases (SOGs) Collection System	2605, 3705	2610S1, 2610S2
9802	*Existing* – Hard Pipe, 850 gallons/minute	2901	Fugitive
9802	*Existing* – Chemical Oxidation Treatment System	None	Fugitive
9803	*New* – Low-Pressure (LP) Steam Stripper, 850 gallons/minute foul condensate, 6.5 gallons/minute methanol	5105, 2505, 5260C, 2605, 3705, 9820	2610S1, 2610S2, 2505S, 5105S
9803	*New* –Stripper Rectified Liquid (SRL) Condenser	5260C, 2605, 3705, 2505, 5105	2610S1, 2610S2, 2505S, 5105S
9804	*New* – 80,400-gallon LP Steam Stripper Feed Tank	5105, 5260C, 2605, 3705	2610S1, 2610S2, 5105S
9805	*New* – 1,300-gallon LP Steam Stripper Rectified Liquid (SRL) Methanol Tank	5105, 5260C, 2605, 3705	2610S1, 2610S2, 5105S
5105	*Modify* – No. 3 NDCE Recovery Furnace, 744,600 ton BLS/year – addition of a 1.0 million Btu/hr ignitor, fired on natural gas	5105C	5105S
5210	*Existing* – Continuous Digester System: Digester Chip Bin, Continuous Digester, Chip Feed System, Blow Tank, Steam Economizer and Reboiler, Pressure Refiners A and B	5105, 5270, 2605, 3705	5105S, 2610S1, 2610S2
2400	*Existing* – No. 1 Multi-Effect Evaporator Set with concentrator	5105, 5260, 5260C, 2605, 3705	5105S, 2610S1, 2610S2
2500	*Existing* – No. 2 Multi-Effect Evaporator Set with concentrator	5105, 5260, 5260C, 2605, 3705	5105S, 2610S1, 2610S2
5100	*Existing* – No. 3 Multi-Effect Evaporator Set with concentrator	5105, 5260, 5260C, 2605, 3705	5105S, 2610S1, 2610S2
5260	*Modify* - LVHC Collection System	5260C, 5105, 2605, 3705	2610S1, 2610S2, 5105S Emergency Relief Valves: 24FL331, 24FL336, 24FL341, 51FL262, 26FL371

A.2 CONTROL DEVICES

Control Device ID	Control Device Description	Pollutant(s) Controlled	Emission Point ID
2505	*Existing* – No. 2 NDCE Recovery Furnace, 412,140-ton BLS/year	VOC, TRS, HAP, SO_2	2505S
2505C	*Existing* – No. 2 Recovery Furnace ESP	PM, PM_{10}, HAP Metals	2505S
5105	*Existing* – No. 3 NDCE Recovery Furnace, 744,600 ton BLS/year	VOC, TRS, HAP, SO_2	5105S
5105C	*Existing* – No. 3 Recovery Furnace ESP	PM, PM_{10}, HAP Metals	5105S
2901	*Existing* – Aerated Biotreatment (Aerated Stabilization Basin (ASB))	VOC, TRS, HAP	Fugitive
2605	*Existing* – No. 1 Combination Boiler, 392–405 million BTU/hr	VOC, TRS, HAP	2610S2
2605C	No. 1 Combination Boiler Centrifugal Cyclone	PM, PM_{10}, $PM_{2.5}$	2610S2
2610C1	No. 1 Combination Boiler ESP	PM, PM_{10}, $PM_{2.5}$	2610S2
3705	*Existing* – No. 2 Combination Boiler, 420–720 million BTU/hr	VOC, TRS, HAP	2610S1
3705C	No. 2 Combination Boiler Centrifugal Cyclone	PM, PM_{10}, $PM_{2.5}$	2610S1
3710C1	No. 2 Combination Boiler ESP	PM, PM_{10}, $PM_{2.5}$	2610S1
9820	*Existing* – Stripper Off Gases (SOGs) Collection System	VOC, TRS, HAP	2610S1, 2610S2
5260C	*Existing* – LVHC System Caustic Scrubber	VOC, TRS, HAP, SO_2	2610S1, 2610S2, 5105S

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
B.1	**Equipment ID:** 9800, 9801, 9820, 9803, 9804, 9805 **Control Device ID:** 2605, 3705 (S.C. Regulation 61-62.1, Section II(J)(2)) A Steam Stripper shall operate at all times during which unbleached kraft pulp is being produced at the mill and foul condensate is being generated other than for periods of scheduled and unscheduled steam stripper downtime where neither stream stripper is operational, which shall not exceed 460 hours per calendar year. (S.C. Regulation 61-62.70.6(a)(3)) The owner or operator must record the actual hours of operation and the actual hours of scheduled and unscheduled downtime (where neither stream stripper is operational) daily and calculate the total annual operation and downtime for each stripper. Reports of the daily values and total operation and downtime hours, per stripper, shall be submitted semiannually.

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
	(S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator shall operate its steam stripper system, comprised of the primary stripper and the existing stripper, in accordance with all applicable state and federal air quality regulations. The owner or operator shall provide notice to the Department at least 48 hours prior to any planned downtime and within 24 hours of unplanned downtime for which the primary stripper will not be operational (and for the existing stripper when it should be operating but will not be). Until the termination of the Consent Order between the Department and New-Indy executed November 23, 2022, New-Indy must provide notification to the public at least 48 hours prior to any planned downtime and within 24 hours of unplanned downtime for which the primary stripper will not be operational (and for the existing stripper when it should be operating but will not be).
B.2	**Equipment ID:** 9800, 9801, 9820 **Control Device ID:** 2605, 3705 (S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator must optimize, operate, and maintain the existing stripper at its current design capacity to allow it to be operated independently of the primary stripper.
B.3	**Equipment ID:** 9802 **Control Device ID:** 2901 (S.C. Regulation 61-62.1, Section II(J)(2)) In the event the stripping system is out of service and foul condensate must be discharged to the ASB, the owner or operator must use automated control of addition of a chemical oxidant, hydrogen peroxide, to treat the unstripped foul condensate prior to discharging into the ASB to maintain a rolling 90-minute average ORP of the foul condensate above 0 millivolts. The owner or operator shall maintain continuous records of the ORP monitoring and provide them to the Department upon request. The owner or operator shall submit semiannual reports to the Department notifying of the date, time, and value of any instance of the rolling ninety-minute average of ORP falling below 0 mV during the previous six (6) months. (S.C. Regulation 61-62.70.6(a)(3)(iii)) If no incidents occurred during the reporting period, then a letter shall indicate such.
B.4	**Equipment ID:** 9803, 9804, 9805 **Control Device ID:** 2505, 5105 (S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator is limited to no more than 2% by volume SRL addition to the black liquor feed to the Recovery Furnaces. Records shall be maintained of the amount by volume of SRL added to the black liquor along with the volume of black liquor fed

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	to the Recovery Furnaces, on a daily basis. This data shall be used to calculate, daily, the percent by volume of SRL added to the black liquor feed. Reports of the daily volume of SRL added to the black liquor, the daily volume of black liquor fed to the furnaces, and the calculated percentage of SRL to black liquor feed shall be submitted semiannually.
B.5	**Equipment ID:** 5260, 9800, 9801, 9803 – Stripper, 9803 – Condenser, 9804, 9805, 9820 **Control Device ID:** 2605, 3705, 2901, 9820, 5260C, 2505, 5105 (S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began after December 31, 1985, emissions from these sources (including fugitive emissions) shall not exhibit an opacity greater than 20%, each. The owner or operator shall perform a visual inspection on a semiannual basis of sources subject to opacity limits. The inspection shall occur during normal source operation. Logs shall be kept to record all visual inspections, noting color, duration, density (heavy or light), cause, and corrective action taken for any abnormal emissions. If a source did not operate during the required visual inspection time frame, the log shall indicate such. The owner or operator shall submit semiannual reports. The report shall include records of abnormal emissions, if any, and corrective actions taken. If the unit did not operate during the semiannual period, the report shall state so. Visual inspection means a qualitative observation of opacity during daylight hours. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water.
B.6	**Equipment ID:** Facility Wide **Control Device ID:** Facility Wide (S.C. Regulation 61-62.6) Fugitive particulate matter (PM) emissions from material handling, process equipment, control equipment, or storage piles will be minimized to the extent practicable in a manner with good air pollution control practices. This will include proper maintenance of the control system such as scheduled inspections, replacement of damaged or worn parts, etc. Fugitive emissions from dust buildup will be controlled by proper housekeeping and/or wet suppression.
B.7	**Equipment ID:** 9801, 9803 – Stripper, 9803 – Condenser, 5260, 9820 **Control Device ID:** 5105, 2605, 3705, 5260C These sources are subject to New Source Performance Standards (NSPS), 40 CFR 60 and S.C. Regulation 61-62.60 Subpart A, General Provisions and Subpart BBa, Standards of Performance for Kraft Pulp Mill Affected Sources for Which Construction, Reconstruction, or Modification Commenced After May 23, 2013, as applicable. These sources shall comply with all applicable requirements of Subparts A and BBa.
B.8	**Equipment ID:** 9801, 9803 – Stripper, 9803 - Condenser, 5260, 9820 **Control Device ID:** 5105, 2605, 3705, 5260C

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	§60.280a 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 §60.283a(a)(1)(iv), any facility under paragraph (a) of this section that commences construction, reconstruction or modification after May 23, 2013, is subject to the requirements of this subpart. Any facility under paragraph (a) of this section that commenced construction, reconstruction, or modification after September 24, 1976, and on or before May 23, 2013 is subject to the requirements of subpart BB of this part.
B.9	**Equipment ID:** 9803 – Stripper, 9803 - Condenser **Control Device ID:** 5105 §60.283a 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 must cause to be discharged into the atmosphere: (1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 parts per million (ppm) by volume on a dry basis, corrected to 10-percent oxygen, unless one of the following conditions are met: (ii) The gases are collected in an LVHC or HVLC closed-vent system meeting the requirements of §63.450 and combusted in a recovery furnace subject to the provisions of either paragraphs (a)(2) or (3) of this section or §60.283(a)(2) or (3); or (b) These standards apply at all times as specified in §§60.284a and 60.285a.
B.10	**Equipment ID:** 9801, 9803 – Stripper, 9803 - Condenser, 5260, 9820 **Control Device ID:** 5105, 2605, 3705, 5260C §60.284a Monitoring of emissions and operations. (d) Excess emissions are defined for this subpart as follows: (3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, periods of excess emissions are:

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	(i) All 12-hour average TRS concentrations above 5 ppm by volume at 10-percent oxygen unless the provisions of §60.283a(a)(1)(i), (ii), or (iv) apply; or (iii) All times when gases are not routed through the closed-vent system to one of the control devices specified in §60.283a(a)(1)(i) through (iii) and (v). (e) The Administrator will not consider periods of excess emissions reported under §60.288a(a) to be indicative of a violation of the standards provided the criteria in paragraphs (e)(1) and (2) of this section are met. (1) The percent of the total number of possible contiguous periods of excess emissions in the semiannual reporting period does not exceed: (vi) For closed-vent systems delivering gases to one of the control devices specified in §60.283a(a)(1)(i) through (iii) and (v), the time of excess emissions divided by the total process operating time in the semiannual reporting period does not exceed: (A) One percent for LVHC closed-vent systems; or (B) Four percent for HVLC closed-vent systems or for HVLC and LVHC closed-vent systems combined. (2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions. (f) The procedures under §60.13 must be followed for installation, evaluation, and operation of the continuous monitoring systems required under this section. All continuous monitoring systems must be operated in accordance with the applicable procedures under Performance Specifications 1, 3, and 5 of appendix B of this part.
B.11	**Equipment ID:** 9801, 9803 – Stripper, 9803 – Condenser, 5260, 9820 **Control Device ID:** 5105, 2605, 3705, 5260C §60.286a Affirmative defense for violations of emission standards during malfunction. In response to an action to enforce the standards set forth in §§60.282a and 60.283a, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at §60.2. Appropriate penalties may be assessed if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense must not be available for claims for injunctive relief. (a) Assertion of affirmative defense. To establish the affirmative defense in any action to enforce

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	such a standard, you must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that: (1) The violation: (i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and (ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and (iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and (iv) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and (2) Repairs were made as expeditiously as possible when a violation occurred; and (3) The frequency, amount, and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and (4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and (5) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and (6) All emission monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and (7) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and (8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and (9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis must also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	malfunction. (b) Report. The owner or operator seeking to assert an affirmative defense must submit a written report to the Administrator with all necessary supporting documentation that explains how it has met the requirements set forth in paragraph (a) of this section. This affirmative defense report must be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.
B.12	**Equipment ID:** 9801, 9803 – Stripper, 9803 - Condenser **Control Device ID:** 5105 §60.287a Recordkeeping. (a) The owner or operator must maintain records of the performance evaluations of the continuous monitoring systems. (b) For each continuous monitoring system, the owner or operator must maintain records of the following information, as applicable: (2) Records of the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of §60.283a(a)(1)(iii) or (iv) apply. (7) Records of excess emissions as defined in §60.284a(d). (c) For each malfunction, the owner or operator must maintain records of the following information: (1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. (2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
B.13	**Equipment ID:** 9801, 9803 – Stripper, 9803 – Condenser, 5260, 9820 **Control Device ID:** 5105, 2605, 3705, 5260C §60.288a Reporting. (a) For the purpose of reports required under §60.7(c), any owner or operator subject to the

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	provisions of this subpart must report semiannually periods of excess emissions defined in §60.284a(d). (d) If a malfunction occurred during the reporting period, you must submit a report that contains the following: (1) The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. (2) A description of actions taken by an owner or operator during a malfunction of an affected facility to minimize emissions in accordance with §60.11(d), including actions taken to correct a malfunction.
B.14	**Equipment ID:** 9801, 9803 – Stripper, 9803 – Condenser, 5260, 9820 **Control Device ID:** 2605, 3705, 5260C §60.283a 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 must cause to be discharged into the atmosphere: (1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 parts per million (ppm) by volume on a dry basis, corrected to 10-percent oxygen, unless one of the following conditions are met: (iii) The gases are collected in an LVHC or HVLC closed-vent system meeting the requirements of §63.450 and combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart (or subpart BB of this part), and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 second; or (b) These standards apply at all times as specified in §§60.284a and 60.285a.
B.15	**Equipment ID:** 9801, 9803 – Stripper, 9803 – Condenser, 5260, 9820 **Control Device ID:** 2605, 3705, 5260C §60.287a Recordkeeping. (a) The owner or operator must maintain records of the performance evaluations of the continuous monitoring systems. (b) For each continuous monitoring system, the owner or operator must maintain records of the following information, as applicable:

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	(7) Records of excess emissions as defined in §60.284a(d). (c) For each malfunction, the owner or operator must maintain records of the following information: (1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. (2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
B.16	**Equipment ID:** 2505, 5105 **Control Device ID:** 2505C, 5105C Note: The monitoring uses 40 CFR Part 63 monitoring methods; however, this is not a 40 CFR Part 63 (MACT) condition. (S.C. Regulation 61-62.5, Standard No. 4, Section III) The opacity from the Nos. 2 and 3 Recovery Furnace shall not exhibit an opacity greater than 40%, each. Periodic monitoring, recordkeeping, and reporting have not been specified by the applicable regulation. It has been determined that the opacity measurements from the continuous opacity monitoring system (COMS) used for showing continuing compliance with NESHAP 40 CFR 63, Subpart MM (MACT MM), will also be used as a direct indicator for showing compliance with SC Std. 4 opacity requirements for the affected sources. All applicable MACT MM QA/QC, calibration, sampling frequency, averaging time, data reduction, record keeping, and operation and maintenance requirements for the COMS will apply for the use of the COMS for SC Std. 4 Opacity monitoring. [SC Reg. 61-62.70(6)(a)(3)(i)(B) {Streamlining; NESHAP 40 CFR 63.864(d)]
B.17	**Equipment ID:** 2505 **Control Device ID:** 2505C (S.C. Regulation 61-62.5, Standard No. 4, Section XI) The maximum allowable discharge of total reduced sulfur (TRS as H_2S) emissions resulting from the No. 2 Recovery Furnace is 20 ppmv corrected to 8% oxygen, averaged over 12 hours. The owner or operator shall continue to calibrate, maintain, and operate continuous monitoring equipment (TRS CEMs) to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from the recovery furnace. The owner or operator shall:

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
	• calculate and record on a daily basis 12-hour average TRS concentrations for the two (2) consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate twelve (12) contiguous 1-hour average TRS concentrations provided by each continuous monitoring system. • calculate and record on a daily basis 12-hour average oxygen concentrations for the two (2) consecutive periods of each operating day. These 12-hour averages shall correspond to the 12-hour average TRS concentrations above. Each 12-hour average shall be determined as the arithmetic mean of the appropriate twelve (12) contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system. • Correct all 12-hour average TRS concentrations to eight (8) volume percent oxygen using the following equation: $C_{corr} = C_{uncorr} \times (21-X/21-Y)$ where: C_{corr} = the concentration corrected for oxygen C_{uncorr} = the concentration uncorrected for oxygen X = the volumetric oxygen concentration percentage to be corrected to ten (10) percent for lime kilns Y = the measured 12-hour average volumetric oxygen concentration Excess emissions from any recovery furnace are defined as all 12-hour average TRS concentrations above five (5) ppmv corrected to 8 percent oxygen. Records shall be kept of any periods of excess emissions and any corrective actions taken along with CEMS data and supporting information. Semiannual reports of any periods of excess emissions and corrective actions taken during these periods shall be submitted. If there are no excess emissions during the reporting period, the report shall indicate such.
B.18	**Equipment ID:** 5105 **Control Device ID:** 5105C This source is subject to New Source Performance Standards (NSPS), 40 CFR 60 Subpart A, General Provisions and Subpart BB, Standards of Performance for Kraft Pulp Mills, and S.C. Regulation 61-62.60 Subparts A and BB, Standards of Performance for Kraft Pulp Mills, as applicable. This source shall comply with all applicable requirements of Subparts A and BB.
B.19	**Equipment ID:** 5105 **Control Device ID:** 5105C §60.282 Standard for particulate matter. (a) On and after the date on which the performance test required to be conducted by §60.8 is

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere: (1) From any recovery furnace any gases which: (i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen. (ii) Exhibit 35 percent opacity or greater.
B.20	**Equipment ID:** 5105 **Control Device ID:** 5105C §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: (2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.
B.21	**Equipment ID:** 5105 **Control Device ID:** 5105C §60.284 Monitoring of emissions and operations. (a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems: (1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmosphere from any recovery furnace. The span of this system shall be set at 70 percent opacity. (2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of §60.283(a)(1) (iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set: (i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	(ii) At 25 percent oxygen for the continuous oxygen monitoring system. (c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of §60.283(a)(1)(iii) or (iv) apply, perform the following: (1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section. (2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section. (3) Using the following equation, correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentrations from a recovery furnace shall be corrected to 8 volume percent oxygen instead of 10 percent, and all 12-hour average TRS concentrations from a facility to which the provisions of §60.283(a)(1)(v) apply shall not be corrected for oxygen content: $C_{corr} = C_{meas} \times (21 - X)/(21 - Y)$ where: Ccorr = the concentration corrected for oxygen. Cmeas = the concentration uncorrected for oxygen. X = the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices). Y = the measured 12-hour average volumetric oxygen concentration. (d) For the purpose of reports required under §60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows: (1) For emissions from any recovery furnace periods of excess emissions are: (i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces. (ii) All 6-minute average opacities that exceed 35 percent.

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of §60.11(d) provided that: (1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed: (i) One percent for TRS emissions from recovery furnaces. (ii) Six percent for average opacities from recovery furnaces. (2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions. (f) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems required under this section. All continuous monitoring systems shall be operated in accordance with the applicable procedures under Performance Specifications 1, 3, and 5 of appendix B of this part.
B.22	**Equipment ID:** 5105 **Control Device ID:** 5105C §60.285 Test methods and procedures. (a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section. (b) The owner or operator shall determine compliance with the particulate matter standards in §60.282(a) (1) and (3) as follows: (1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to §60.284(c)(3). (2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	(3) Method 9 and the procedures in §60.11 shall be used to determine opacity. (d) The owner or operator shall determine compliance with the TRS standards in §60.283, except §60.283(a)(1)(vi) and (4), as follows: (1) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in §60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours. (2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples. (3) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference—see §60.17) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made 3 times daily from the green liquor, and the daily average values shall be converted to sodium oxide (Na20) and substituted into the following equation to determine the green liquor sulfidity: $$GLS = 100\ C_{Na_2S}/\left(C_{Na_2S}C_{NaOH}C_{Na_2CO_3}\right)$$ Where: GLS = green liquor sulfidity, percent. C_{Na2S} = concentration of Na_2S as Na_2O, mg/liter (gr/gal). C_{NaOH} = concentration of NaOH as Na_2O, mg/liter (gr/gal). C_{Na2CO3} = concentration of Na_2CO_3 as Na_2O, mg/liter (gr/gal). (e) The owner or operator shall determine compliance with the TRS standards in §60.283(a)(1)(vi) and (4) as follows: (1) The emission rate (E) of TRS shall be computed for each run using the following equation: $E = C_{TRS}\ F\ Q_{sd}/P$ where: E = emission rate of TRS, g/kg (lb/ton) of BLS or ADP. C_{TRS} = average combined concentration of TRS, ppm. F = conversion factor, 0.001417 g H_2S/m3-ppm (8.846 × 10−8 lb H_2S/ft3-ppm). Q_{sd} = volumetric flow rate of stack gas, dscm/hr (dscf/hr). P = black liquor solids feed or pulp production rate, kg/hr (ton/hr).

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	(2) Method 16 shall be used to determine the TRS concentration (C_{TRS}). (3) Method 2 shall be used to determine the volumetric flow rate (Q_{sd}) of the effluent gas. (4) Process data shall be used to determine the black liquor feed rate or the pulp production rate (P). (f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section: (1) For Method 5, Method 17 may be used if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 204°C (400 °F). (2) In place of Method 16, Method 16A or 16B may be used.
B.23	**Equipment ID:** 5105 (S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator shall continue to calibrate, maintain, and operate continuous monitoring equipment, the TRS CEMS, as required by 40 CFR 60 Subpart BB and in accordance with the appropriate Performance Specifications and Quality Assurance Procedures in 40 CFR 60, Appendices B & F.
B.24	**Equipment ID:** 5105 (S.C. Regulation 61-62.1, Section II(J)(2)) The existing TRS CEMS, required by 40 CFR 60 Subpart BB, will be used to verify the emission rates, in lb/hr, and the performance guarantees, in lb/ADTP (pounds per air dried ton of pulp) for TRS and H_2S. For 60 operating days prior to combusting methanol and LVHC gases, TRS CEMS data shall be collected from the No. 3 Recovery Furnace. For 60 operating days after the No. 3 Recovery Furnace begins combustion of SRL and LVHC gases the TRS CEMS data shall be collected. TRS CEMS data shall be collected during normal operation from the No. 3 Recovery Furnace. A report shall be submitted summarizing the before and after data from the TRS CEMS, an analysis and comparison of the before and after data, along with conclusions about the performance of the No. 3 Recovery Furnace with respect to the emission rates and performance guarantees for TRS and H_2S. This report shall be submitted within 60 days after completion of the TRS CEMS data acquisition for the post-change period. Prior to the start of this data collection, the TRS CEMS shall be calibrated, maintained, and operated in accordance with the appropriate Performance Specifications and Quality Assurance Procedures in 40 CFR 60, Appendices B & F.
B.25	**Equipment ID:** 5105 (S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator shall install, calibrate, maintain, and operate a SO_2 CEMS on the outlet of the No. 3 Recovery Furnace. The CEMS must be calibrated, operated, and maintained according to the appropriate Performance Specifications and Quality Assurance Procedures in 40 CFR 60, Appendices B & F.

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
	The SO_2 CEMs shall be operational, and data collected prior to and during combustion of any LVHCs and SRL in the Recovery Furnace is specified below. -**Baseline:** SO_2 emissions from the No. 3 Recovery Furnace prior to combusting any LVHCs or SRL shall be collected for 90 operating days. - **Existing LVHCs Only**: After obtaining the baseline SO_2 emissions data, the facility can begin combusting the existing LVHC gases. SO_2 emissions from the No. 3 Recovery Furnace during combustion of existing LVHCs shall be collected for 60 operating days. Any periods when the existing LVHC gases are not routed to the No. 3 Recovery Furnace shall be excluded from the data and operating days. -**LVHCs and SRL**: After obtaining the Existing LVHCs Only SO_2 emissions data, the facility can begin combusting the new and existing LVHC gases and SRL in the No. 3 Recovery Furnace. SO_2 emissions from the No. 3 Recovery Furnace during the combustion of new and existing LVHC and SRL shall be collected for 90 operating days. Any periods when the new and existing LVHC gases and SRL are not routed to the Recovery Furnace shall be excluded from the data and operating days. After the required data acquisition, the owner or operator shall submit a report summarizing the baseline data and data from each of the other two data collection periods, an analysis and comparison of this data to the emission factors and emission rates used in the PSD evaluation for this project, and conclusions about the performance of the No. 3 Recovery Furnace. This report shall be submitted within 60 days after completion of the data acquisition for the LVHC and SRL data collection period. Also, data from the TRS CEMS, on the No. 3 Recovery Furnace, shall be collected simultaneously and analyzed and compared to the data from the SO_2 CEMS for all collection periods, and conclusions made about the performance of the No. 3 Recovery Furnace. An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information.
B.26	**Equipment ID:** 5105 (S.C. Regulation 61-62.5, Standard No. 7) The No. 3 Recovery Furnace is subject to the existing SO_2 BACT limits during black liquor solids firing of:

SO_2 Limitations for ID 07: 5105		
SO_2 Limit	**Limit Units**	**Applicable Regulation**

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
	<table><tr><td>≤ 50.0</td><td>ppmv @8% O_2 (dry basis)</td><td>SC Std 7 (PSD BACT)</td></tr><tr><td>≤ 551.0</td><td>tpy</td><td>SC Std 7 (PSD BACT)</td></tr></table> ppmv (dry basis) = parts per million volume basis and dry tpy = tons per year ≤ = less than or equal to Continuous compliance with the existing SO_2 BACT limits will be demonstrated using the SO_2 CEMS. The facility shall continue to calibrate, operate, and maintain the SO_2 CEMS in accordance with the appropriate Performance Specifications and Quality Assurance Procedures in 40 CFR 60, Appendices B & F. The owner or operator shall use the SO_2 CEMs data to calculate SO_2 emissions on a ppmv @8% O_2 annual rolling average basis calculated daily and a tons per year twelve month rolling sum basis calculated monthly. SO_2 emissions shall be less than or equal to 50.0 ppmv @8% O_2 based on a rolling annual average (average of 365 days, 24 hour block averages) and 551.0 tons per year based on a twelve month rolling sum. Readings collected when black liquor solids are not fired in the recovery furnace or when the unit is shutdown or not operating may not be used in the calculations. Reports of the daily ppmv block average, ppmv annual rolling average calculated for each day in the reporting period, the tons per month, and the tons per year twelve month rolling sum calculated for each month in the reporting period shall be submitted semiannually. Any exceedances of the ppmv annual rolling average or tons per year twelve month rolling sum shall be reported to the Department within 48 hours. An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information. Once normal operation has resumed and operation of the new stripper has begun the facility may submit a request for the Department's consideration to remove the SO_2 CEMS, after five (5) years of operation.
B.27	**Equipment ID:** 5105 (S.C. Regulation 61-62.5, Standard No. 7) The No. 3 Recovery Furnace is subject to the existing SO_2 BACT limits of: <table><tr><th colspan="3">SO_2 Limitations for ID 07: 5105</th></tr><tr><th>SO_2 Limit</th><th>Limit Units</th><th>Applicable Regulation</th></tr><tr><td>≤ 50.0</td><td>ppmv @8% O_2 (dry basis)</td><td>SC Std 7 (PSD BACT)</td></tr></table>

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
	≤ 551.0 | tpy | SC Std 7 (PSD BACT) ppmv (dry basis) = parts per million volume basis and dry tpy = tons per year ≤ = less than or equal to Periodic source testing will be used to show compliance with the applicable PSD BACT SO_2 emission limits for the No. 3 Recovery Furnace. Source testing shall be conducted every four years (4) in accordance with SC Regulation 62.1, Section IV and Federal requirements, when applicable. EPA Method 6/6C will be used to show compliance. Alternative test methods may be allowed, provided Department approval is granted during the test plan submittal and approval process described in SC Regulation 61-62.1, Section IV - Source Tests and §70.7 - Permit Issuance, Renewal, Reopenings and Revisions, as appropriate. If a source exceeds fifty (50) percent of its emission limit during a stack test, stack tests shall be scheduled and conducted annually. Upon demonstration that the source is operating under 50 percent of its limit, as shown by two consecutive annual stack tests in which emissions are less than 50% of the standard, the source may resume stack testing every four (4) years. The owner or operator shall show continuing compliance with applicable annual PSD BACT SO_2 limitations for the No. 3 Recovery Furnace using record keeping. The owner or operator shall maintain the actual monthly tons of black liquor solids and/or fuels fired in the No. 3 Recovery Furnace and calculate a 12-month rolling sum for SO_2. The production information along with the best available emission data from Bureau approved emission factors and/or emission factors based on compliance source tests shall be used to calculate the 12-month rolling sum SO_2 emissions. The SO_2 emissions shall be less than or equal to 551.0 tons per year. Reports of the calculated values and the twelve-month rolling sum calculated each month in the reporting period shall be kept on site. The Manager of the Technical Management Section shall be notified within 30 days if any of the twelve-month rolling emission average is over the ton per year limit. An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information.
B.28	**Equipment ID:** 2605, 3705 **Control Device ID:** 5260C (S.C. Regulation 61-62.1, Section II(J)(2)) Initial source tests for SO_2 emissions from the boilers shall be conducted, as specified below, within 180 days after the startup of the new LP Stripper System and the LVHCs (new and existing) collected in the LVHC Collection System are combusted in one of the combination boilers. The source tests will be used to verify the effectiveness of the LVHC Scrubber by verifying the uncontrolled and controlled SO_2 emission rates and the design specifications SO_2 emission factors relied upon for the PSD evaluation.

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	- A stack test for SO_2 emissions will be performed while burning LVHC and utilizing the caustic scrubber. - Another stack test for SO_2 will be performed while burning LVHC without the use of the caustic scrubber. In lieu of testing both combination boilers, the facility may test the single combination boiler that would yield the maximum SO2 emissions should be used for this testing. The facility shall provide justification on which boiler provides the maximum emissions in the stack test plan and copy the Air Permitting Division Director. Detailed calculations that include the estimated LVHC removal efficiency, shall also be submitted in the final test report, and copy the Air Permitting Division Director.
B.29	**Equipment ID:** 2605, 3705 (S.C. Regulation 61-62.1, Section II(J)(2)) Source tests for SO_2 emissions from the boilers shall be conducted as specified below. When either Combination Boiler is combusting stripper off gases (SOGs), source testing shall be performed to verify the SO_2 emissions in lb/hr and SO_2 emission factor in lb/ADTP for the following scenarios: - For the new stripper, within 180 days after startup of the new LP Stripper System, when existing LVHC gases are controlled in the existing LVHC scrubber and combined with the new SOGs (SRL condenser offline) and are being controlled in either Combination Boiler, an initial source test for SO_2 emissions in lb/hr and the SO_2 emission factor in lb/ADTP shall be documented. - For the backup stripper, at the first scheduled downtime of the new LP Stripper System, when existing LVHC gases are controlled in the existing LVHC scrubber and are combined with the SOGs and are being controlled in either Combination Boiler, an initial source test for SO_2 emissions in lb/hr and the SO_2 emission factor in lb/ADTP shall be performed. - For when the new stripper is offline, an initial source test shall also be performed to determine the contribution from combusting the existing scrubbed LVHC gases in either Combination Boiler to the SO_2 emissions, in lb/hr and the SO_2 emission factor in lb/ADTP. The contribution of each stripper's SOGs will be calculated as the SO_2 emissions from the testing performed in the selected combination boiler when combusting the existing scrubbed LVHC gases and the SOGs minus the SO_2 emissions from the testing performed for the existing scrubbed LVHC gases only from that same selected combination boiler. The combination boiler that would yield the maximum emissions should be used for this testing. In lieu of testing both combination boilers, the facility may test the single combination boiler that would yield the maximum SO2 emissions should be used for this testing. Detailed calculations shall also be submitted in the final test report and copy the Air Permitting Division Director.
B.30	**Equipment ID:** 9804 **Control Device ID:** 9803

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	(S.C. Regulation 61-62.1, Section II(J)(2)) Within 60 days of startup of the new steam stripper, an initial performance test (IPT) for liquid sampling and analysis of TRS, H_2S, and methanol compounds in and out of the steam stripper shall be conducted to demonstrate the 98 and 95 percent proposed design removal efficiency provided by the vendor for TRS/H_2S and methanol, respectively, and to develop and verify associated lb/hr and lb/ADTP emissions. The IPT shall also establish operating and monitoring parameters that are indicative of a strong relationship between proper operation of the stripper and the TRS, H_2S, and methanol removal over a range of operating conditions. During the IPT, parameters to monitor shall include, but are not limited to, stripper inlet feed rate, steam feed rate, and stripper inlet feed temperature. The owner or operator shall submit for approval a plan that identifies the operating and monitoring parameters to be monitored, the relationship between the operating and monitoring parameters and percent removal of TRS, H_2S, and methanol, the TRS, H_2S, and methanol emissions and the records to be maintained for predicting emissions for demonstrating ongoing compliance with project emissions. The operating and monitoring plan shall also include the data used to identify the relationship between the removal efficiencies for TRS, H_2S, and methanol and the operating and monitoring parameters and how these will be monitored on an hourly basis during stripper operation, and the quality assurance procedures to ensure the data generated will be representative and accurate. This plan shall be submitted within 60 days after the final IPT report is submitted to the Air Permitting Division Director. Semiannual performance tests shall be conducted for the new steam stripper. After completion of eight consecutive semiannual tests, performance testing shall be conducted annually for a period of two years and once every five (5) years thereafter. Semiannual tests shall be conducted no less than 270 days from the previous test. Subsequent performance tests shall be used to verify and/or update the relationship between the operating and monitoring parameters and percent removal of TRS, H_2S, and methanol. Updates to the operating and monitoring plan shall be submitted within 60 days of the performance test.
B.31	**Equipment ID:** 9800 **Control Device ID:** 9801 (S.C. Regulation 61-62.1, Section II(J)(2)) During the first scheduled operating time of the existing (backup) steam stripper, an initial performance test (IPT) for liquid sampling and analysis of TRS, H_2S, and methanol compounds in and out of the existing (backup) steam stripper shall be conducted to develop and verify the TRS, H_2S, and methanol emissions, in lb/hr and lb/ADTP. The IPT shall also establish operating and monitoring parameters that are indicative of a strong relationship between proper operation of the stripper and the TRS, H_2S, and methanol removal over a range of operating conditions. During the IPT, parameters to monitor shall include, but are not limited to, stripper inlet feed rate, steam feed rate, and stripper inlet feed temperature. The owner or operator shall submit for approval a plan that identifies the operating and monitoring

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	parameters to be monitored, the relationship between the operating and monitoring parameters and the TRS, H_2S, and methanol emissions, and the records to be maintained for predicting emissions for demonstrating ongoing compliance with project emissions. The plan shall also include the data used to identify the relationship between the TRS, H_2S, and methanol emissions and the operating and monitoring parameters and how these will be monitored on an hourly basis during the period of operation of the stripper, and the quality assurance procedures to ensure the data generated will be representative and accurate. This plan shall be submitted within 60 days after the final IPT report is submitted to the Air Permitting Division Director. Within 60 days after the final IPT report on the backup stripper is approved by the Department, the facility shall submit for approval a procedure and schedule for readiness testing of the existing, backup stripper. The procedure shall identify operational and maintenance checks to be made to ensure the proper operation of the existing stripper when it is operated. Inspection items for the existing stripper will be detailed in the readiness procedure along with the frequency of the checks and inspections for each item. The checks and inspections and any corrective actions shall be documented and kept on-site. The readiness testing procedure shall be submitted to the Air Permitting Division Director. The readiness testing procedure may be updated following submittal to the Department.
B.32	**Equipment ID:** 5105 (S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator shall use data from the existing NOx CEMS to compare and analyze the NOx emissions from the No. 3 Recovery Furnace to verify the performance guarantee, in lb/TBLS, and emission rates, in lb/hr. For 60 operating days prior to combusting SRL and LVHC gases, NOx CEMS data shall be collected from the No. 3 Recovery Furnace. For 60 operating days after the No. 3 Recovery Furnace begins combustion of SRL and LVHC gases, the NO_X CEMS data shall also be collected. NOx CEMS data shall be collected during normal operation of the No. 3 Recovery Furnace. A report shall be submitted summarizing the before and after data from the NOx CEMS, an analysis and comparison of the before and after data, along with conclusions about the performance of the No. 3 Recovery Furnace with respect to the emission rates and performance guarantees for NOx. This report shall be submitted within 60 days after completion of the NOx CEMS data acquisition for the post-change period.
B.33	**Equipment ID:** 2605, 3705 **Control Device ID:** 2605C, 2610C1, 3705C, 3710C1 (S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator shall keep daily records of the fossil fuel usage in each boiler, steam in and steam out for each stripper, and any other information necessary to verify the rates used in the steam balance and determine emissions from the boilers. This data shall be collected, during normal operation, for a period of 180 days after this project is complete and each stripper is operational. For each stripper, an average, for the reporting period, of the increased boiler usage, in million Btu/hr, shall be calculated along with PM, PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, VOC, Pb, and CO_2e emissions. A report of the calculated values along with the recorded data shall be submitted 30 days after the end of the data collection period. An algorithm, including

B. LIMITATIONS, MONITORING, AND REPORTING

Condition Number	Conditions
	example calculations, explaining the method used to determine the emission rates, shall be submitted, along with the report
B.34	**Equipment ID:** 2505, 5105, 2605, 3705 **Control Device ID:** 2505C, 5105C, 2605C, 2610C1, 3705C, 3710C (S.C. Regulation 62.5, Standard No. 7(R)(6)) The owner or operator shall maintain production rate records, fuel usage records, and any other records necessary to determine PM_{10}, $PM_{2.5}$, NO_X, and VOC emissions from fossil fuel combustion in the Nos. 1 and 2 Combination Boilers, the new 1.0 million Btu/hr Ignitor in the No. 3 Recovery Furnace, SRL combustion in the Nos. 2 and 3 Recovery Furnaces, LVHC combustion in the No. 3 Recovery Furnace, LVHC and SOG combustion in the Nos. 1 and 2 Combination Boilers, and the Aerated Stabilization Basin (ASB) and the Foul Condensate Hardpipe. All emissions shall be calculated on an annual basis, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations to the new stripper, backup stripper, recovery furnaces, combination boilers, and LVHC Collection System. If the annual emissions exceed the baseline actual emissions established within the construction permit application for this project by a significant amount (as defined in S.C. Regulation 62.5, Standard No. 7(B)(49)) for any regulated NSR pollutant, the owner or operator shall submit a report to the Department within 60 days after the end of such year. The report shall contain the following: 1. The facility's name, address, and telephone number; 2. The annual emissions as calculated pursuant to S.C. Regulation 62.5, Standard No. 7(R)(6)(d); and 3. Any other information needed to make a compliance determination (*e.g.*, an explanation as to why the emissions differ from the preconstruction projection).
B.35	**Equipment ID:** 2505, 5105, 2605, 3705, 2901, 9802 **Control Device ID:** 2505C, 5105C, 2605C, 2610C1, 3705C, 3710C (S.C. Regulation 61-62.1, Section II(J)(2)) The owner or operator shall maintain production rate records and any other records necessary to determine H_2S and TRS emissions from SRL combustion in the Nos. 2 and 3 Recovery Furnaces, LVHC combustion in the No. 3 Recovery Furnace, LVHC and SOG combustion in the Nos. 1 and 2 Combination Boilers, the Aerated Stabilization Basin (ASB), and the Foul Condensate Hardpipe. All emissions shall be calculated on an annual basis, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations to the new stripper, backup stripper, recovery furnaces, combination boilers, and LVHC Collection System. If the annual emissions exceed the baseline actual emissions established within the construction permit application for this project by a significant amount (as defined in S.C. Regulation 62.5, Standard No. 7(B)(49)) for any regulated NSR pollutant, the owner or operator shall submit a report to the Department within 60 days after the end of such year. The report shall contain the following:

B. LIMITATIONS, MONITORING, AND REPORTING	
Condition Number	**Conditions**
	1. The facility's name, address, and telephone number; 2. The annual emissions as calculated pursuant to S.C. Regulation 62.5, Standard No. 7(R)(6)(d); and Any other information needed to make a compliance determination (*e.g.*, an explanation as to why the emissions differ from the preconstruction projection).
B.36	**Equipment ID:** 9801, 9802, 9803, 9804, 9805, 5105, 5260 **Control Device ID:** 2505, 5105, 2605, 3705, 5260C, 2901, 9820 The owner or operator shall continue to operate under all applicable requirements, including emission limits and standards, testing, monitoring, record keeping, and reporting under the existing Title V Operating Permit (2440-0005) and any unincorporated construction permits that are not changed or contravened by this construction permit.
B.37	Reports submitted under this construction permit shall be submitted as follows: As of November 16, 2022, semiannual reports shall be submitted. The semiannual report for the January – June period is due by the 31st day of July. The semiannual report for the July – December period is due by the 31st day of January.
B.38	**Equipment ID:** All CEMS (S.C. Regulation 61-62.1, Section II(J)(2)) For all CEMS required or referenced in this construction permit, that are used to demonstrate compliance, the owner or operator shall develop a data substitution plan for periods of CEMS downtime or malfunction. The plan(s) must be submitted to the Department for review and approval, at least 45 days prior to initial startup of new sources or post-modification startup for existing sources. The plan(s) may be updated following submittal and approval of the revision by the Department.

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
C.1	(40 CFR §61.04(b); 40 CFR §63.9(a)(4)(ii) and §63.10(a)(4)(ii)) All NESHAP notifications and reports shall be sent to the Department. Electronic submission of notifications or reports to the United States Environmental Protection Agency (US EPA) via CEDRI (Compliance and Emissions Data Reporting Interface) shall serve as the submission to the Department. CEDRI can be accessed through the EPA's Central Data Exchange (CDX).
C.2	(40 CFR §61.04(b); 40 CFR §63.9(a)(4)(ii) and §63.10(a)(4)(ii)) All NESHAP notifications and reports requiring electronic submission to US EPA shall be submitted to EPA via CEDRI. Notifications and reports for specific NESHAP subparts not yet requiring electronic submission may also be submitted

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	via CEDRI. Notifications and the accompanying cover letter for periodic reports not submitted via CEDRI shall be sent to the US EPA Region 4 Air and Radiation Division as required by the applicable subpart.
C.3	This facility has processes subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subparts A and Subpart S - National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry. Existing affected sources shall be in compliance with the requirements of these Subparts by the compliance date, unless otherwise noted. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.
C.4	§63.440 Applicability. (a) The provisions of this subpart apply to the owner or operator of processes that produce pulp, paper, or paperboard; that are located at a plant site that is a major source as defined in §63.2 of subpart A of this part; and that use the following processes and materials: (1) Kraft, soda, sulfite, or semi-chemical pulping processes using wood; or (2) Mechanical pulping processes using wood; or (3) Any process using secondary or non-wood fibers. (b) The affected source to which the existing source provisions of this subpart apply is as follows: (1) For the processes specified in paragraph (a)(1) of this section, the affected source is the total of all HAP emission points in the pulping and bleaching systems; or (2) For the processes specified in paragraphs (a)(2) or (a)(3) of this section, the affected source is the total of all HAP emission points in the bleaching system. (c) The new source provisions of this subpart apply to the total of all HAP emission points at new or existing sources as follows: (1) Each affected source defined in paragraph (b)(1) of this section that commences construction or reconstruction after December 17, 1993; (2) Each pulping system or bleaching system for the processes specified in paragraph (a)(1) of this section that commences construction or reconstruction after December 17, 1993; (3) Each additional pulping or bleaching line at the processes specified in paragraph (a)(1) of this section, that commences construction after December 17, 1993; (4) Each affected source defined in paragraph (b)(2) of this section that commences

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	construction or reconstruction after March 8, 1996; or (5) Each additional bleaching line at the processes specified in paragraphs (a)(2) or (a)(3) of this section, that commences construction after March 8, 1996. (e) Each new source, specified as the total of all HAP emission points for the sources specified in paragraph (c) of this section, shall achieve compliance upon start-up or June 15, 1998, whichever is later, as provided in §63.6(b) of subpart A of this part. (f) Each owner or operator of an affected source with affected process equipment shared by more than one type of pulping process, shall comply with the applicable requirement in this subpart that achieves the maximum degree of reduction in HAP emissions. (g) Each owner or operator of an affected source specified in paragraphs (a) through (c) of this section must comply with the requirements of subpart A—General Provisions of this part, as indicated in table 1 to this subpart. *Note: Only the kraft pulping system requirements apply to the New-Indy Catawba LLC facility.*
C.5	§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 (a)(1)(ii)(B) of this section 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).

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(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 §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:

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(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 one of the following: (i) A boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone; or (ii) A boiler or recovery furnace with a heat input capacity greater than or equal to 44 megawatts (150 million British thermal units per hour) by introducing the HAP emission stream with the combustion air. (e) Periods of excess emissions reported under §63.455 shall not be a violation of §63.443(c) and (d) provided that the time of excess emissions 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.
C.6	§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 system condensate from:

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(i) The vapors from each stage where weak liquor is introduced (feed stages); and (ii) Each evaporator vacuum system for each stage where weak liquor is introduced (feed stages). (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 §§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 §§63.443(d) and 63.450, instead of in accordance with §63.693 as specified in §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)

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	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 §63.450 and routed to a control device that meets the requirements in §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 §63.443(a) meeting the requirements specified in §63.443(c) and (d); or (2) Discharge the pulping process condensate below the liquid surface of a biological treatment system and treat the pulping process condensates to meet the requirements specified in paragraph (e)(3), (4), or (5) of this section, and total HAP shall be measured as specified in §63.457(g); 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; (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 §63.443(c) and (d). (g) For each control device (e.g., steam stripper system or other equipment serving the same function) used to treat pulping process condensates to comply with the requirements specified in paragraphs (e)(3) through (5) of this section, periods of excess emissions reported under §63.455 shall not be a violation of paragraphs (d), (e)(3) through (5), and (f) of this section provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent. The 10 percent excess emissions allowance does not apply to treatment of pulping process condensates according to paragraph (e)(2) of this section (e.g., the biological wastewater treatment system used to treat multiple (primarily non-condensate) wastewater streams

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	to comply with the Clean Water Act).
C.7	§63.450 Standards for enclosures and closed-vent systems. (a) Each enclosure and closed-vent system specified in §§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 in §63.457(e). Each enclosure or hood opening closed during the initial performance test specified in §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 §§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 §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 §§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 the manufacturer's specifications a flow indicator that is capable of taking periodic readings as frequently as specified in §63.454(e). 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.
C.8	§63.453 Monitoring requirements. (a) Each owner or operator subject to the standards specified in §§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 §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

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	thermal oxidizer used to comply with the requirements of §63.443(d)(1) through (d)(3). Owners and operators complying with the HAP concentration requirements in §63.443(d)(2) may install a CMS to monitor the thermal oxidizer outlet total HAP or methanol concentration, as an alternative to monitoring thermal oxidizer operating temperature. (g) A CMS shall be operated to measure the following parameters for each steam stripper used to comply with the treatment requirements in §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 §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 §63.446(c). (k) Each enclosure and closed-vent system used to comply with §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 §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 §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 §63.450(c) measured initially and annually by the procedures in §63.457(d). (4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in §63.457(e). (5) The valve or closure mechanism specified in §63.450(d)(2) shall be inspected at least once

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	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 §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. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the owner or operator determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown. (l) Each pulping process condensate closed collection system used to comply with §63.446(d) shall comply with the requirements specified in paragraphs (l)(1) through (l)(3) of this section. (1) Each pulping process condensate closed collection system shall be visually inspected every 30 days and shall comply with the inspection and monitoring requirements specified in §63.964 of subpart RR of this part, except: (i) Owners or operators shall comply with the recordkeeping requirements of §63.454 instead of the requirements specified in §63.964(a)(1)(vi) and (b)(3) of subpart RR of this part. (ii) Owners or operators shall comply with the inspection and monitoring requirements for closed-vent systems and control devices specified in paragraphs (a) and (k) of this section instead of the requirements specified in §63.964(a)(2) of subpart RR of this part. (2) Each condensate tank used in the closed collection system shall be operated with no detectable leaks as specified in §63.446(d)(2)(i) measured initially and annually by the procedures specified in §63.457(d). (3) If an inspection required by this section identifies visible defects in the closed collection system, or if an instrument reading of 500 parts per million or greater above background is measured, then corrective actions specified in §63.964(b) of subpart RR of this part shall be

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	taken. (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), (j)(2), and (m) of this section, each owner or operator shall use the following procedures: (1) During the initial performance test required in §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, §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. (q) At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
C.9	§63.454 Recordkeeping requirements. (a) The owner or operator of each affected source subject to the requirements of this subpart shall comply with the recordkeeping requirements of §63.10, as shown in Table 1 of this subpart, and the requirements specified in paragraphs (b) through (g) of this section for the monitoring parameters specified in §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. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(d) The owner or operator shall record the CMS parameters specified in §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. (e) The owner or operator shall set the flow indicator on each bypass line specified in §63.450(d)(1) to provide a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. (g) Recordkeeping of malfunctions. The owner or operator must maintain the following records of malfunctions: (1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. (2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.453(q), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
C.10	§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 to subpart S of part 63 and all the following requirements in this section. The initial notification report specified under §63.9(b)(2) of subpart A of this part shall be submitted by April 15, 1999, or no later than 120 days after the source becomes subject to this subpart, whichever is later. (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. (g) Malfunction reporting requirements. If a malfunction occurred during the reporting period, the report must include the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.453(q), including actions taken to correct a malfunction. (h) The owner or operator must submit performance test reports as specified in paragraphs (h)(1) through (4) of this section.

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(1) The owner or operator of an affected source shall report the results of the performance test before the close of business on the 60th day following the completion of the performance test, unless approved otherwise in writing by the Administrator. A performance test is "completed" when field sample collection is terminated. Unless otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions and raw data. A complete test report must include the purpose of the test; a brief process description; a complete unit description, including a description of feed streams and control devices; sampling site description; pollutants measured; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions, including operating parameters for which limits are being set, during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; chain-of-custody documentation; explanation of laboratory data qualifiers; example calculations of all applicable stack gas parameters, emission rates, percent reduction rates, and analytical results, as applicable; and any other information required by the test method and the Administrator. (2) Within 60 days after the date of completing each performance test (defined in §63.2) as required by this subpart, the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by this subpart to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (http://www.epa.gov/cdx). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/index.html). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, the owner or operator must also submit these reports, including the CBI, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13. (3) Within 60 days after the date of completing each CEMS performance evaluation test as defined in §63.2, the owner or operator must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with paragraph (2) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the owner or operator must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13. (4) All reports required by this subpart not subject to the requirements in paragraphs (h)(2) and (3) of this section must be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraphs (h)(2) and (3) of this section in paper format.
C.11	§63.456 Affirmative defense for violation of emission standards during malfunction. In response to an action to enforce the standards set forth in §§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), the owner or operator may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed, however, if the owner or operator fails to meet the burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief. (a) To establish the affirmative defense in any action to enforce such a standard, the owner or operator must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that: (1) The violation: (i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, and (ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and (iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and (iv) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and (2) Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and (3) The frequency, amount and duration of the violation (including any bypass) were

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	minimized to the maximum extent practicable; and (4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and (5) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and (6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and (7) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and (8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and (9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction. (b) Report. The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.
C.12	§63.457 Test methods and procedures. (a) Performance tests. Initial and repeat performance tests are required for the emissions sources specified in paragraphs (a)(1) and (2) of this section, except for emission sources controlled by a combustion device that is designed and operated as specified in §63.443(d)(3) or (4). (1) Conduct an initial performance test for all emission sources subject to the limitations in §§63.443, 63.444, 63.445, 63.446, and 63.447. (2) Conduct repeat performance tests at five-year intervals for all emission sources subject to

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	the limitations in §§63.443, 63.444, and 63.445. The first of the 5-year repeat tests must be conducted by September 7, 2015, and thereafter within 60 months from the date of the previous performance test. Five-year repeat testing is not required for the following: (i) Knotter or screen systems with HAP emission rates below the criteria specified in §63.443(a)(1)(ii). (ii) Decker systems using fresh water or paper machine white water, or decker systems using process water with a total HAP concentration less than 400 parts per million by weight as specified in §63.443(a)(1)(iv). (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 §§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 part 60, appendix A–1, 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 part 60, appendix A–1, as appropriate. (4) The moisture content of the vent gas shall be measured using Method 4 of part 60, appendix A–3. (5) To determine vent gas concentrations, the owner or operator shall conduct a minimum of three test runs that are representative of normal conditions and average the resulting

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	pollutant concentrations using the following procedures. (i) Method 308 in Appendix A of this part; Method 320 in Appendix A of this part; Method 18 in appendix A–6 of part 60; ASTM D6420–99 (Reapproved 2004) (incorporated by reference in §63.14(b)(28) of subpart A of this part); or ASTM D6348–03 (incorporated by reference in §63.14(b)(54) of subpart A of this part) shall be used to determine the methanol concentration. If ASTM D6348–03 is used, the conditions specified in paragraphs (b)(5)(i)(A) though (b)(5)(i)(B) must be met. (A) The test plan preparation and implementation in the Annexes to ASTM D6348–03, sections A1 through A8 are required. (B) In ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5 of ASTM D6348–03). In order for the test data to be acceptable for a compound, %R must be between 70 and 130 percent. If the %R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte following adjustment of the sampling or analytical procedure before the retest. The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound using the following equation: Reported Result = Measured Concentration in the Stack × 100)/%R. (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 test runs 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 test 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 §§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 of the test method listed in paragraph (c)(3) of this section selected to determine liquid stream HAP concentrations; (i) Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and

C. NESHAP (40 CFR 61 AND 40 CFR 63)

Condition Number	Conditions
	(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) The owner or operator shall conduct a minimum of three test runs that are representative of normal conditions and average the resulting pollutant concentrations. The minimum sampling time for each test run shall be 1 hour and the grab or composite samples shall be taken at approximately equally spaced intervals over the 1-hour test run period. The owner or operator shall use one of the following procedures to determine total HAP or methanol concentration: (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: $\bar{C}$ = 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) For determining methanol concentrations, NCASI Method DI/MEOH–94.03. This test method is incorporated by reference in §63.14(f)(1) of subpart A of this part. (iii) Any other method that measures total HAP concentration that has been demonstrated to the Administrator's satisfaction. (5) If the test method used to determine HAP concentration indicates that a specific HAP is not detectable, the value determined as the minimum measurement level (MML) of the selected test method for the specific HAP shall be used in the compliance demonstration

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	calculations. To determine the MML for a specific HAP using one of the test methods specified in paragraph (c)(3) of this section, one of the procedures specified in paragraphs (c)(5)(i) and (ii) of this section shall be performed. The MML for a particular HAP must be determined only if the HAP is not detected in the normal working range of the method. (i) To determine the MML for a specific HAP, the following procedures shall be performed each time the method is set up. Set up is defined as the first time the analytical apparatus is placed in operation, after any shut down of 6 months or more, or any time a major component of the analytical apparatus is replaced. (A) Select a concentration value for the specific HAP in question to represent the MML. The value of the MML selected shall not be below the calibration standard of the selected test method. (B) Measure the concentration of the specific HAP in a minimum of three replicate samples using the selected test method. All replicate samples shall be run through the entire analytical procedure. The samples must contain the specific HAP at the selected MML concentration and should be representative of the liquid streams to be analyzed in the compliance demonstration. Spiking of the liquid samples with a known concentration of the target HAP may be necessary to ensure that the HAP concentration in the three replicate samples is at the selected MML. The concentration of the HAP in the spiked sample must be within 50 percent of the proposed MML for the demonstration to be valid. As an alternative to spiking, a field sample above the MML may be diluted to produce a HAP concentration at the MML. To be a valid demonstration, the diluted sample must have a HAP concentration within 20 percent of the proposed MML, and the field sample must not be diluted by more than a factor of five. (C) Calculate the relative standard deviation (RSD) and the upper confidence limit at the 95 percent confidence level using the measured HAP concentrations determined in paragraph (c)(5)(i)(B) of this section. If the upper confidence limit of the RSD is less than 30 percent, then the selected MML is acceptable. If the upper confidence limit of the RSD is greater than or equal to 30 percent, then the selected MML is too low, and the procedures specified in paragraphs (c)(5)(i)(A) through (C) of this section must be repeated. (ii) Provide for the Administrator's approval the selected value of the MML for a specific HAP and the rationale for selecting the MML including all data and calculations used to determine the MML. The approved MML must be used in all applicable compliance demonstration calculations.

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(6) When using the MML determined using the procedures in paragraph (c)(5)(ii) of this section or when using the MML determined using the procedures in paragraph (c)(5)(i), except during set up, the analytical laboratory conducting the analysis must perform and meet the following quality assurance procedures each time a set of samples is analyzed to determine compliance. (i) Using the selected test method, analyze in triplicate the concentration of the specific HAP in a representative sample. The sample must contain the specific HAP at a concentration that is within a factor of two of the MML. If there are no samples in the set being analyzed that contain the specific HAP at an appropriate concentration, then a sample below the MML may be spiked to produce the appropriate concentration, or a sample at a higher level may be diluted. After spiking, the sample must contain the specific HAP within 50 percent of the MML. If dilution is used instead, the diluted sample must contain the specific HAP within 20 percent of the MML and must not be diluted by more than a factor of five. (ii) Calculate the RSD using the measured HAP concentrations determined in paragraph (c)(6)(i) of this section. If the RSD is less than 20 percent, then the laboratory is performing acceptably. (d) Detectable leak procedures. To measure detectable leaks for closed-vent systems as specified in §63.450 or for pulping process wastewater collection systems as specified in §63.446(d)(2)(i), the owner or operator shall comply with the following: (1) Method 21, of part 60, appendix A–7; 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 §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;

C. NESHAP (40 CFR 61 AND 40 CFR 63)

Condition Number	Conditions
	(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 §§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 §63.446, the owner or operator shall measure the total HAP concentration as methanol. For biological treatment systems complying with §63.446(e)(2), the owner or operator shall measure total HAP as acetaldehyde, methanol, methyl ethyl ketone, and propionaldehyde and follow the procedures in §63.457(l)(1) or (2). (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 §§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.

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(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: $$R = \frac{E_i - E_O}{E_i}(100)$$ 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 §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,

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	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: $$F = \frac{E_a}{P}$$ Where: F = Mass loading of total HAP or methanol in the sample, in kilograms per megagram of ODP. E_a = 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: $$R = \frac{E_b - E_a}{E_b} \times 100$$ 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

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	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 §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 part 60, appendix A–2 shall be used to determine the oxygen concentration. The samples shall be taken at the same time that the HAP samples are taken. As an alternative to Method 3B, ASME PTC 19.10–1981 [Part 10] may be used (incorporated by reference, see §63.14(i)(1)). (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 and mass removal calculations. To demonstrate compliance with the condensate treatment standards specified in §63.446(e)(2) and the monitoring requirements specified in §63.453(j)(3) using a biological treatment system, the owner or operator shall use one of the procedures specified in paragraphs (1)(1) and (2) of this section. Owners or operators using a nonthoroughly mixed open biological treatment system shall also comply with paragraph (1)(3) of this section.

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	(1) Percent reduction methanol procedure. For the purposes of complying with the condensate treatment requirements specified in §63.446(e)(2) and (3), the methanol percent reduction shall be calculated using the following equations: $$R = \frac{f_{bio}(MeOH)}{(1+1.087(r))} * 100$$ $$r = \frac{F_{(nonmethanol)}}{F_{(methanol)}}$$ Where: R = Percent destruction. f_{bio}(MeOH) = The fraction of methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the appropriate procedures specified in appendix C of this part. r = Ratio of the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass to methanol mass. $F_{(nonmethanol)}$ = The sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass flow rates (kg/Mg ODP) entering the biological treatment system determined using the procedures in paragraph (j)(2) of this section. $F_{(methanol)}$ = The mass flow rate (kg/Mg ODP) of methanol entering the system determined using the procedures in paragraph (j)(2) of this section. (2) Mass removal methanol procedure. For the purposes of complying with the condensate treatment requirements specified in §63.446(e)(2) and (4), or §63.446(e)(2) and (5), the methanol mass removal shall be calculated using the following equation: $$F = F_b * \left(f_{bio}(MeOH)/(1+1.087(r))\right)$$ Where: F = Methanol mass removal (kg/Mg ODP). F_b = Inlet mass flow rate of methanol (kg/Mg ODP) determined using the procedures in paragraph (j)(2) of this section. f_{bio}(MeOH) = The fraction of methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the appropriate procedures specified in appendix C of this part. r = Ratio of the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass to methanol mass determined using the procedures in paragraph (1) of this section. (m) Condensate segregation procedures. The following procedures shall be used to demonstrate

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	compliance with the condensate segregation requirements specified in §63.446(c). (1) To demonstrate compliance with the percent mass requirements specified in §63.446(c)(2), the procedures specified in paragraphs (m)(1)(i) through (iii) of this section shall be performed. (i) Determine the total HAP mass of all condensates from each equipment system listed in §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 determined 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 §63.446(c)(2) is demonstrated if the condensate stream or streams from each equipment system listed in §63.446(b)(1) through (3) being treated as specified in §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 §63.446(c)(3), the procedures specified in paragraphs (m)(2)(i) through (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 §63.446(b)(1) through (b)(3) and the total condensates streams from the equipment systems listed in §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 §63.446(c)(3) 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 §63.446(c)(3). (o) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
C.13	§63.458 Implementation and enforcement. (a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to

C. NESHAP (40 CFR 61 AND 40 CFR 63)	
Condition Number	**Conditions**
	a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency. (b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency. (c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section. (1) Approval of alternatives to the requirements in §§63.440, 63.443 through 63.447 and 63.450. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart. (2) Approval of alternatives to using §§63.457(b)(5)(iii), 63.457(c)(3)(ii) through (iii), and 63.257(c)(5)(ii), and any major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart. (3) Approval of alternatives using §64.453(m) and any major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart. (4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

D. GENERAL FACILITY WIDE	
Condition Number	**Conditions**
D.1	The owner or operator shall comply with S.C. Regulation 61-62.6, Control of Fugitive Particulate Matter, Section III Control of Fugitive Particulate Matter Statewide.
D.2	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.
D.3	In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II(L), the owner or operator may document an emergency situation through properly signed, contemporaneous operating logs, and other relevant evidence that verify: 1. An emergency occurred, and the owner or operator can identify the cause(s) of the emergency;

D. GENERAL FACILITY WIDE

Condition Number	Conditions
	2. The permitted source was at the time the emergency occurred being properly operated; 3. During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and 4. The owner or operator gave a verbal notification of the emergency to the Department within twenty-four (24) hours of the time when emission limitations were exceeded, followed by a written report within thirty (30) days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II(J)(1)(c)(i) through (J)(1)(c)(viii). The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
D.4	(S.C. Regulation 61-62.1, Section II(O)) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following: 1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit. 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. 3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit. 4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
D.5	(S.C. Regulation 61-62.1, Section II(J)(1)(a)) No applicable law, regulation, or standard will be contravened.
D.6	(S.C. Regulation 61-62.1, Section II(J)(1)(e)) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this regulation or with the terms of any approval to construct, or who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to enforcement action.

E. EMISSIONS INVENTORY REPORTS - RESERVED

F. GENERAL RECORD KEEPING AND REPORTING	
Condition Number	**Conditions**
F.1	(S.C. Regulation 61-62.1, Section II(J)(1)(g)) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years from the date the record was generated and shall be made available to a Department representative upon request.
F.2	The owner or operator shall submit reports required in this permit in a timely manner and according to the reporting schedule established through the Department's approved electronic permitting system.
F.3	All reports and notifications required under this permit shall be submitted to the Department.
F.4	(S.C. Regulation 61-62.1, Section II(A)(3)) The owner or operator shall submit written notification to the Department of the date construction is commenced, postmarked within thirty (30) days after such date.
F.5	(S.C. Regulation 61-62.1, Section II(J)(1)(c)) For sources not required to have continuous emission monitors, any malfunction of air pollution control equipment or system, process upset, or other equipment failure which results in discharges of air contaminants lasting for one (1) hour or more and which are greater than those discharges described for normal operation in the permit application, shall be reported to the Department within twenty-four (24) hours after the beginning of the occurrence and a written report shall be submitted to the Department within thirty (30) days. The written report shall include, at a minimum, the following: 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 7. The steps taken to limit the excess emissions; and, 8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions. The initial twenty-four (24) hour notification should be made to the Department's local Regional

F. GENERAL RECORD KEEPING AND REPORTING	
Condition Number	**Conditions**
	Office. The written report should be sent to the Department.

G. PERMIT EXPIRATION AND EXTENSION	
Condition Number	**Conditions**
G.1	(S.C. Regulation 61-62.1, Section II(A)(4) and (5) and S.C. Regulation 61-62.1, Section II(J)(1)(f)) Approval to construct shall become invalid if construction: a. Is not commenced within eighteen (18) months after receipt of such approval; b. Is discontinued for a period of eighteen (18) months or more; or c. Is not completed within a reasonable time as deemed by the Department. The Department may extend the construction permit for an additional eighteen (18) month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within eighteen (18) months of the projected and approved commencement date.

H. PERMIT TO OPERATE	
Condition Number	**Conditions**
H.1	(S.C. Regulation 61-62.1, Section II(F)(3)) When a Department issued construction permit includes engineering and/or construction specifications, the owner or operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department. If construction is certified as provided above, the owner or operator may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department. If construction is not built as specified in the permit application and associated construction permit(s), the owner or operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation. Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered

H. PERMIT TO OPERATE	
Condition Number	**Conditions**
	construction without a permit.
H.2	(S.C. Regulation 61-62.1, Section II(F)(1)) The owner or operator shall submit written notification to the Department of the actual date of initial startup of each new or altered source, postmarked within fifteen (15) days after such date. Any source that is required to obtain an air quality construction permit issued by the Department must obtain an operating permit when the new or altered source is placed into operation and shall comply with the requirements of this section.
H.3	(S.C. Regulation 61-62.1, Section II(F)(4)(a)) For sources covered by an effective Title V Operating Permit, the modification request required by S.C. Regulation 61-62.70 shall serve as the request to operate for the purposes of S.C. Regulation 61-62.1, Section II(F). The request should be made using the appropriate Title V modification form.

I. AMBIENT AIR STANDARDS	
Condition Number	**Conditions**
I.1	Air dispersion modeling (or other method) has previously demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in this demonstration may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. The owner or operator shall maintain this facility at or below the emission rates used in the most recent air dispersion modeling (or other method) demonstration submitted to and approved by the Department, not to exceed the pollutant limitations of this permit. Should the facility wish to increase the emission rates used in the demonstration, not to exceed the pollutant limitations in the body of this permit, it may do so by submitting a new demonstration for approval. This condition along with the referenced modeling demonstration will also serve to meet the intent of S.C. Regulation 61-62.5, Standard No. 8, Section II(D). This is a State Only enforceable requirement.