ADEQ
ARKANSAS
Department of Environmental Quality

February 20, 2008

Alban Bush, Director of Technical Services
Delta Natural Kraft
PO Box 20700
Pine Bluff, AR 71611

Dear Mr. Bush:

The enclosed Permit No. 0385-AOP-R7 is issued pursuant to the Arkansas Operating Permit Program, Regulation # 26.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 0385-AOP-R7 for the construction, operation and maintenance of an air pollution control system for Delta Natural Kraft to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under §2.1.14 of Regulation No. 8, Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, within thirty (30) days after service of this decision.

All persons submitting written comments during this thirty (30) day period, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by §2.1.14 of Regulation No. 8.

Sincerely,

Mike Bates

Mike Bates
Chief, Air Division

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE / NORTH LITTLE ROCK / ARKANSAS 72118-5317 / TELEPHONE 501-682-0744 / FAX 501-682-0880
www.adeq.state.ar.us

RESPONSE TO COMMENTS

Delta Natural Kraft and Mid-America Packaging
1701 Jefferson Parkway
P.O. Box 20700
Pine Bluff, AR 71612
Jefferson County
AFIN: 35-00017

On December 18, 2007, the draft permit for the above referenced facility was issued. During the comment period, the following comment was submitted.

Comment: Section IV: Specific Conditions:
Specific Condition #99:
Prior to issuance of revision 6 (R6) of Delta's permit, the minimum scrubber flow rate for the Hog Fuel Boiler (SN-05) was 150 gpm. With the issuance of R6 the Boiler MACT standards were included in the permit, due to the reduced manganese (Mg) standard the minimum scrubber flow rate was raised to 170 gpm to ensure Delta met the Mg requirements. However, the Boiler MACT was rescinded and with the issuance draft R7 of the permit the Boiler MACT standards were removed. However, the Department overlooked the minimum scrubber flow rate. Please reduce the flow rate to the requirement as established prior to the incorporation of the Boiler MACT standards.

Response: Specific Condition #99 now reads as follows:

> *The permittee shall monitor the liquid flow rate to the Hog Fuel Boiler (SN-05) scrubber and shall monitor the scrubber fan amperage. The flow rate shall be maintained at a minimum of 150 gpm. When the Hog Fuel Boiler is operating the scrubber liquid flow rate and scrubber fan amperage will be continuously monitored. The permittee shall adjust the minimum flow rate upon completion of the particulate stack test which is required* during the first year of each 5-year permit cycle. *[§19.303, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]*

ADEQ
OPERATING
AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 385-AOP-R7
Renewal #1
IS ISSUED TO:
Delta Natural Kraft and Mid-America Packaging, LLC
1701 Jefferson Parkway
Pine Bluff, AR 71611
Jefferson County
AFIN: 35-00017

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

October 20, 2003 AND October 19, 2008

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates

Mike Bates
Chief, Air Division

February 20, 2008
Date Modified

Table of Contents

SECTION I: FACILITY INFORMATION 4
SECTION II: INTRODUCTION 5
  Summary of Permit Activity 5
  Process Description 5
  Regulations 9
  Emission Summary 10
SECTION III: PERMIT HISTORY 28
SECTION IV: SPECIFIC CONDITIONS 36
  SN-13 and 17 Digester Building 36
  SN-08A, 08 and 11 Brownstock Washers System 38
  SN-15A thru 15J, 16A thru 16C, 18, 19A thru 19D and 40 Papermaking Operations 39
  SN-36 and 37 Associated Paper Machine Storage Tanks 45
  SN-12, 33, 34, 38, 39, and 55 Black Liquor Tanks 47
  SN-02 Recovery Boiler 51
  SN-04 Smelt Dissolving Tank 58
  SN-03, 10, 14, 23, 24, 27, 31 and 35 Caustic Area 62
  SN-20, 21, 22, 28, 29, 30 and 32 Caustic Area Tanks 66
  SN-01 Lime Kiln 69
  SN-41 Wastewater Treatment Aeration Basin 75
  SN-05 Hog Fuel Boiler 80
  SN-06 Power Boiler 84
  SN-50 thru 54 Non-Point Source Emissions 86
  SN-100 thru 110 Mid-America Packaging 89
  HVLC/LVHC Closed-Vent System 96
  Condensate Collection System 101
  Subpart MM Conditions 105
SECTION V: COMPLIANCE PLAN AND SCHEDULE 113
SECTION VI: PLANTWIDE CONDITIONS 114
SECTION VII: INSIGNIFICANT ACTIVITIES 119
SECTION VIII: GENERAL PROVISIONS 120
Appendix A: CEMS Conditions
Appendix B: Regulation 19, Chapter 8
Appendix C: NESHAP Subpart S
Appendix D: NESHAP Subpart KK
Appendix E: NSPS Subpart Kb
Appendix F: Alternate Test Method Approval Letter
Appendix G: NESHAP subpart MM
Appendix H: EPA Approval Letter for NESHAP Subpart MM Alterative Monitoring

List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate Matter
PM10	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	Delta Natural Kraft and Mid-America Packaging, LLC
AFIN:	35-00017
PERMIT NUMBER:	385-AOP-R7
FACILITY ADDRESS:	1701 Jefferson Parkway Pine Bluff, AR 71611
MAILING ADDRESS	P.O. Box 20700 Pine Bluff, AR 71611
COUNTY:	Jefferson
CONTACT POSITION:	Alban Bush, Director of Technical Services
TELEPHONE NUMBER:	870-541-5046
REVIEWING ENGINEER:	Amanda Leamons
UTM North South (Y):	Zone 15: 3792.0
UTM East West (X):	Zone 15: 589.6

SECTION II: INTRODUCTION

Summary of Permit Activity

Delta Natural Kraft (Delta) operates a kraft pulp and paper mill in Pine Bluff, Arkansas. Mid-America Packaging (MAP) manufactures multi-wall bags from the paper produced by Delta. Both facilities are permitted under this permit.

This minor modification to Permit 385-AOP-R6 revises specific conditions contained in the permit to reflect the most recent monitoring requirements under 40 CFR Part 63, Subpart MM. In addition, conditions were added in the Subpart MM section of the permit to address the alternative monitoring requirements allowed through EPA determinations for dynamic scrubbers. In the case of Delta these monitoring requirements apply to the Lime Kiln Scrubber (SN-01), Recovery Boiler TRS Scrubber (SN-02), and the Smelt Dissolving Tank Scrubber (SN-04). Lastly, all conditions and language pertaining to 40 CFR Part 63, Subpart DDDDD (Boiler MACT) have been removed from the permit. The Boiler MACT was rescinded since the issuance of 385-AOP-R6 and the conditions are no longer applicable. This modification will not affect permitted emissions. This modification will modify permit language to agree with the most current version of Subpart MM.

Process Description
Pine Bluff Mill

At the Delta Natural Kraft Pine Bluff Mill (Delta), chips are brought in as raw material. Chips are unloaded and conveyed to the screening system, which separates acceptable from unacceptable material. Knots and rocks are separated from the chips with a fan and chips are collected with a cyclone. Unacceptable material is sent to the hogged fuel storage piles. Acceptable chips are stored in chip piles or in the chip silo.

Chips are conveyed from the chip silo to the digesters (SN-13 and SN-17). A mixture of white liquor and spent caustic from the white liquor measuring tank and black liquor from the washers is charged along with the chips. A batch is cooked by recirculating liquor through a steam supplied heat exchanger.

During digester cooks, the capping valve at the top of the digester is closed. Gases generated during the cooking cycle are extracted from the digester and flow to the turpentine system where the gases are condensed. The resulting turpentine is stored until being loaded into railcars. Low Volume High Concentration (LVHC) gases generated are collected and combusted in the lime kiln. The capping valve is open between and during chip fills and any remaining gases are released to the atmosphere.

The contents of the digesters are blown to the blow tank upon completion of the cook. Gases from the blow tank are condensed in the primary and secondary condensers. Water and condensed gases fall into the accumulator while the remaining LVHC gases are collected and burned in the lime kiln (SN-01).

From the blow tank, the pulp is sent to the brown stock washers (SN-08A and SN-08B) to remove black liquor, which flows to the foam tank (SN-11). The black liquor is de-foamed before it is pumped to weak black liquor storage. High Volume Low Concentration (HVLC) gases from the brown stock washers (SN-08A and SN-08B), black liquor filter, rejects surge tank, hot stock surge tank, and foam tank are sent to the NCG HVLC condenser and then to the NCG HVLC heater to reduce the moisture content. The HVLC gases are then routed to the Lime Kiln (SN-01) for destruction.

Washed pulp is sent from the washers to the high-density tanks for storage. Recycled paper (secondary fiber) is used as supplemental feed stock. Secondary fiber is reduced to a pulp form in the pulper tub and sent to high-density storage.

Pulp from the high-density storage tanks (SN-36 and SN-37) is pumped to the decker where the consistency is adjusted to the desired level before being sent to the paper machine. To aid in drying the paper sheet, blowers (SN-16A thru SN-16C) and vacuum pumps (SN-18 and SN-19A thru SN-19D) pull a vacuum on the wet end of the paper machine. The paper sheet then passes to the dry end (SN-15A thru SN-15J) where it is further dried over steam heated dryer cans. Emissions from the dry end of the paper machine are captured by an exhaust hood and discharged to the atmosphere. The sheet is wound onto rolls in preparation for shipping as the sheet exits the dry ends.

Weak black liquor from the weak black liquor storage tanks (SN-33 and SN-34) is pumped to the black liquor evaporators where the solids content of the black liquor is increased due to evaporation of water. Pure steam is used as the heat source for the first evaporator while a mixture of steam and vapor is used as the heat source for subsequent evaporators. Vapor from the evaporators is collected and condensed, and the remaining non-condensible gases (NCGs) are combusted in the lime kiln. Black liquor is pumped from the evaporators to the soap collection system where the soap is skimmed and stored in preparation for railcar loading. From the final evaporator, strong black liquor is pumped to the strong black liquor storage.

Black liquor from the heavy black liquor storage is pumped to the black liquor oxidation tank (SN-12) where air is blown into the oxidizer tank, contacting the black liquor and raising the solids content. The liquor is then pumped to the recovery boiler (SN-02) where it is burned, creating the heat necessary to produce steam for use throughout the mill. Natural gas is used for startup of the recovery boiler. Boiler flue gases are blown through the electrostatic precipitator and sent to the total reduced sulfur (TRS) scrubber where the gases are cleaned and discharged.

The recovery operations recover spent cooking chemicals for reuse in the digesters. Smelt resulting from the combustion process flows to the smelt dissolving tank (SN-04) where it is dissolved to form green liquor which is sent to the caustic area. Gases emitted during the dissolving process are cleaned in a scrubber and discharged.

Green liquor passes through a clarifier (SN-31 and SN-35) which removes dregs before it is sent to storage (SN-20 and SN-21). Clarified green liquor is then sent to the slaker (SN-03) where fresh lime and reburned lime are added to form sodium hydroxide and calcium carbonate. The dregs are washed with water and discarded to the sewer (SN-23 and SN-24).

This white liquor slurry then passes through the causticizers before entering a clarifier. Here lime mud is separated from the white liquor. The white liquor is sent to storage to be used in the pulping process. Dilute lime mud is then washed with water, the cake is collected in a filter (SN-14), and the cake is fed to the lime kiln (SN-01). The reburned lime is sent to storage. Delta purchases fresh lime to be used as make up for the reburned lime. The fresh lime is delivered and unloaded by a pneumatic truck. Air is blown into the storage compartment of the truck to force the lime from the storage compartment into the lime silo (SN-10).

Heat is provided to the lime kiln by burning natural gas along with non-condensible gas (NCG) collected from the mill. Flue gases from the lime kiln pass through three scrubbers in series to remove dust before being discharged to the atmosphere.

A hog fuel boiler (SN-05) and a power boiler (SN-06) are operated to meet the steam demands of the mill. Hog fuel (bark, fines, knots) is burned in the hog fuel boiler to generate steam for the mill. Flue gas from the boiler passes through a cyclone and a scrubber to remove particulate before being discharged to the atmosphere. Natural gas is used for startup of the boiler and as an auxiliary fuel. Natural gas is the only fuel used in the power boiler which converts water to steam for the mill.

Effluent from the mill flows through a ditch to a clarifier where solids are allowed to settle. Clarified water flows to the aeration basin (SN-41) where aerators provide agitation and oxygen to the water. Condensate from the turpentine underflow tank and standpipe, evaporator hotwell, NCG HVLC condenser seal tank, and blow heat accumulator tank can be collected in the foul condensate tank before being pumped to the aeration basin where it enters through a submerged distribution header. Treated water is discharged to the Arkansas River. LVHC gases from the foul condensate tank are sent to the lime kiln for destruction.

Mid-America Packaging

Mid-America Packaging (MAP) is a manufacturer of multi-wall bags. The outer layer of the bags is formed with paper printed with graphics specified by the customer. The plates used in the printing process are made on-site at MAP. Several layers of paper are pasted together and the paper is folded and pasted into tubes. The tubes are bottomed to form bags, which are shipped to the customer.

MAP has five printing presses, No. 1 through No. 5, which are capable of printing different colors on a single roll of paper. Presses No. 3 through No. 5 also have the capability to apply a water-based lacquer coating to the paper. Various additives are mixed with the ink to maintain appropriate application conditions.

The No. 3 Press is equipped with two drying chambers heated by natural gas. After ink has been applied to the paper, the sheet passes through the Tunnel Dryer (SN-102). Water-based lacquer is then applied to the paper sheet and the sheet passes through another heated chamber connected to the Lacquer Dryer (SN-103).

The No. 4 Press is equipped with three natural gas heated drying chambers and one chamber consisting of a blower only (no combustion unit). Ink is dried as the paper sheet passes through chambers connected to the Between Decks Dryer (SN-104) and the Tunnel Dryer (SN-105). The paper then enters another chamber into which unheated air is blown by the Auxiliary Blower (SN-106). Water-based lacquer is then applied to the paper sheet and the sheet passes through another heated chamber connected to the Lacquer Dryer (SN-107). The printed paper sheet then enters the rewind unit where it is wound onto a reel.

The No. 5 Press is equipped with two drying chambers heated by natural gas. After ink has been applied to the paper, the sheet passes through the Between Decks Dryer and the Tunnel Dryer. The No. 5 press does not have the capability to apply water-based lacquer to the sheet like the No. 3 Press and the No. 4 Press.

Bags are assembled using the printed paper rolls as the outer wall of the bags. Layers of paper are pasted together, the paper is folded and pasted into tubes, and the bottoms of the tubes are pasted or sewn shut. The bags are then prepared for shipping.

Bottom and seam paste are made on site at MAP. Starch and water are combined and cooked to make the paste. During the addition of the starch to the cooker, an exhaust hood fan (SN-101) pulls particulate matter from the work area and exhausts it to the atmosphere. After the batch is cooked, resin and other ingredients are added to the paste. A natural gas fired boiler (SN-100) produces the steam necessary to cook the paste.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective October 15, 2007
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002
40 CFR 63 National Emission Standard for Hazardous Air Pollutants (NESHAP), Subpart S - *for the Pulp and Paper Industry*
40 CFR 63 NESHAP, Subpart MM - *for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand -Alone Semichemical Pulp Mills*
40 CFR 63 NESHAP, Subpart KK - *for the Printing and Publishing Industry*
40 CFR Part 64, Compliance Assurance Monitoring (CAM)

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

Emission Summary

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
Total Allowable Emissions (Pine Bluff Mill and MAP Combined)		PM	146.6	397.6
		PM_{10}	146.6	397.6
		SO_2	33.0	123.8
		VOC	593.1	2,193.9
		CO	7,912.8	22,333.1
		NO_X	85.5	329.7
		Pb	0.0337	0.1508
		TRS	41.2	472.3
		Acetaldehyde	19.35	81.5
		Acrolein	0.31	1.10
		Acrylonitrile	0.02	0.07
		Aniline	0.04	0.17
		Benzene	0.21	0.89
		Bromomethane	0.83	3.63
		Carbon Disulfide	0.21	0.91
		Chloromethane	69.07	302.50
		Formaldehyde	2.61	10.41
		Hydrochloric Acid	2.81	12.28
		Iodomethane	0.82	3.56
		Methanol	353.26	1500.92
		2-Methylphenol	5.92	25.86
		MEK	2.08	8.30
		Phenol	8.81	38.56
		Styrene	0.70	2.83
		Toluene	0.28	1.26

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
		Phosphorus	0.08	0.29
		Arsenic	0.01	0.01
		Beryllium	0.01	0.01
		Cadmium	0.01	0.04
		Chromium	0.04	0.18
		Chromium +6	0.01	0.01
		Manganese	0.56	2.42
		Mercury	0.01	0.01
		Nickel	0.04	0.15
		Selenium	0.01	0.01
		Acetone	5.63	64.06
		Ammonia	6.97	29.81
		Sulfuric Acid	0.17	0.73
		Barium	0.06	0.23
		Copper	0.01	0.03
		Silver	0.01	0.01
		Thallium	0.01	0.01
		Zinc	0.06	0.26
		HAP (@SN102-108)	84.5	24.5

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
01	Lime Kiln	PM	7.0	30.7
		PM_{10}	7.0	30.7
		SO_2	6.3	9.2
		VOC	3.5	12.7
		CO	2.1	8.2
		NO_X	12.5	48.8
		Pb	0.003	0.011
		TRS	3.4	14.9
		Acetaldehyde	0.09	0.35
		Acrolein	0.01	0.02
		Benzene	0.01	0.03
		Bromomethane	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Chloromethane	0.01	0.04
		Formaldehyde	0.07	0.27
		Methanol	1.46	5.02
		2-Methylphenol	0.01	0.03
		MEK	0.02	0.05
		Phenol	0.01	0.02
		Styrene	0.01	0.02
		Toluene	0.02	0.06
		Phosphorus	0.05	0.17
		Chromium +6	0.01	0.01
		Barium	0.01	0.01
		Copper	0.01	0.01
		Silver	0.01	0.01
		Thallium	0.01	0.01
		Zinc	0.01	0.02
		Acetone	0.14	0.52

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
02	Recovery Boiler	PM	17.0	74.5
		PM_{10}	17.0	74.5
		SO_2	21.2	92.7
		VOC	374.2	1638.9
		CO	7703.6	21,420.0
		NO_X	18.2	79.4
		TRS	35.0	153.3
		Acetaldehyde	14.89	65.22
		Acrolein	0.03	0.12
		Acrylonitrile	0.02	0.06
		Aniline	0.04	0.17
		Benzene	0.17	0.72
		Bromomethane	0.83	3.62
		Carbon Disulfide	0.15	0.66
		Chloromethane	69.04	302.37
		Formaldehyde	1.30	5.70
		Hydrochloric Acid	1.79	7.81
		Iodomethane	0.82	3.56
		Methanol	270.73	1,185.78
		MEK	0.88	3.86
		2-Methylphenol	5.82	25.49
		Phenol	8.80	38.54
		Styrene	0.41	1.78
		Toluene	0.22	0.95
		Phosphorus	0.01	0.01
		Acetone	9.16	40.11
		Sulfuric Acid	0.17	0.73
		Arsenic	0.01	0.01
		Beryllium	0.01	0.01
		Cadmium	0.01	0.01
		Chromium +6	0.01	0.01
		Lead	0.001	0.001
		Manganese	0.02	0.05
		Mercury	0.001	0.001
		Selenium	0.01	0.01
		Zinc	0.01	0.02

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
03	Lime Slaker	PM	3.0	13.1
		PM_{10}	3.0	13.1
		VOC	0.7	2.7
		TRS	0.1	0.1
		Acetaldehyde	0.31	1.19
		Benzene	0.01	0.01
		Methanol	0.31	1.19
		MEK	0.01	0.03
		Styrene	0.01	0.03
		Toluene	0.01	0.01
		Acetone	0.11	0.43
		Ammonia	1.60	6.26
04	Smelt Dissolving Tank	PM	6.5	28.5
		PM_{10}	6.5	28.5
		SO_2	0.4	1.4
		VOC	3.8	16.3
		NO_X	0.7	2.9
		TRS	0.7	3.0
		Benzene	0.01	0.04
		Bromomethane	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Chloromethane	0.01	0.01
		Methanol	3.22	14.10
		MEK	0.05	0.20
		Styrene	0.01	0.02
		Toluene	0.01	0.02
		Phosphorus	0.01	0.02
		Chromium +6	0.01	0.01
		Acetone	0.11	0.46
		Ammonia	0.97	4.25
		Barium	0.01	0.01
		Copper	0.01	0.01
		Silver	0.01	0.01
		Thallium	0.01	0.01
		Zinc	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
05	Hog Fuel Boiler	PM	53.6	234.7
		PM_{10}	53.6	234.7
		SO_2	4.0	17.6
		VOC	7.1	31.1
		CO	197.6	865.2
		NO_X	42.7	147.9
		Pb	0.03	0.14
		Acetone	0.01	0.03
		Acetaldehyde	0.02	0.08
		Acrolein	0.01	0.01
		Benzene	0.01	0.05
		Carbon Disulfide	0.03	0.10
		Chloromethane	0.01	0.04
		Formaldehyde	0.06	0.24
		Hydrochloric Acid	1.02	4.47
		Methanol	0.23	0.99
		MEK	0.01	0.01
		Phenol	0.01	0.01
		Styrene	0.01	0.02
		Toluene	0.01	0.01
		Phosphorus	0.03	0.12
		Beryllium	0.0004	0.0018
		Cadmium	0.008	0.035
		Chromium	0.04	0.18
		Chromium +6	0.01	0.01
		Manganese	0.54	2.37
		Mercury	0.0003	0.0014
		Nickel	0.0324	0.142
		Barium	0.06	0.23
		Copper	0.01	0.03
		Silver	0.01	0.02
		Zinc	0.05	0.22

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
06	Power Boiler	PM	0.6	2.6
		PM_{10}	0.6	2.6
		SO_2	0.1	0.5
		VOC	0.5	2.2
		CO	6.4	28.1
		NO_X	7.7	33.8
08A	Washer Hood Exhaust Fan A	These sources are routed to the Lime Kiln (SN-01) as required by NESHAP Subpart S		
08B	Washer Hood Exhaust Fan B			
11	Foam Tank Stack			
10	Fresh Lime Storage	PM	55.0	5.0
		PM_{10}	55.0	5.0
12	Black Liquor Oxidation Tank Stack	SO_2	0.5	1.7
		VOC	8.1	35.5
		TRS	0.9	3.6
		Acetaldehyde	0.44	1.91
		Methanol	6.54	28.62
		Benzene	0.01	0.04
		Bromomethane	0.01	0.01
		Carbon Disulfide	0.04	0.16
		Chloromethane	0.01	0.05
		MEK	0.15	0.63
		Phenol	0.01	0.01
		Styrene	0.01	0.05
		Toluene	0.01	0.04
		Acetone	0.85	3.73
14	Lime Mud Filter Vacuum Pump	VOC	0.3	1.0
		TRS	0.1	0.1
		Acetone	0.02	0.05
		Acetaldehyde	0.01	0.01
		Methanol	0.20	0.79
		MEK	0.01	0.03
		Styrene	0.01	0.01
		Toluene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
13	Digester Building Vent (No. 1 and No. 2)	VOC	5.5	15.2[1]
		TRS	0.2	0.4[1]
		Acetaldehyde	0.03	0.08[1]
		Methanol	0.16	0.43[1]
		MEK	0.01	0.02[1]
		Toluene	0.01	0.01[1]
		Acetone	0.05	0.12[1]
17	Digester Building Vent No. 3	VOC	2.8	
		TRS	0.1	
		Acetaldehyde	0.02	
		Methanol	0.08	
		MEK	0.01	
		Toluene	0.01	
		Acetone	0.03	
15 (A - J)	Paper Machine Dry End Fans (1, 1A, 1B, 2, 2A, 3, 3A, 4, 5 and 6)	PM	0.3[2]	1.4[2]
		PM_{10}	0.3[2]	1.4[2]
		SO_2	0.1[2]	0.1[2]
		VOC	9.5[2,4]	33.8[2,4]
		CO	2.3[2]	10.1[2]
		NO_X	2.8[2]	12.3[2]
		TRS	0.3[2]	0.8[2]
		Acetaldehyde	0.57[2]	2.02[2]
		Acetone	0.69[2]	2.45[2]
		Acrolein	0.13[2]	0.44[2]
		Formaldehyde	0.48[2]	1.71[2]
		Methanol	5.15[2,3]	18.25[2,3]
		MEK	0.10[2]	0.33[2]
		Styrene	0.02[2]	0.07[2]
16A	Fourdrinier Blower A	VOC	6.9[4]	24.4[4]
		Acetone	0.10	0.36
		Methanol	5.15[3]	18.25[3]
		Acetaldehyde	0.03	0.09
		MEK	0.03	0.08
		Toluene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
16B	Fourdrinier Blower B	VOC	5.8[4]	20.6[4]
		Acetone	0.06	0.20
		Methanol	5.15[3]	18.25[3]
		Acetaldehyde	0.04	0.12
16C	Fourdrinier Blower C	VOC	6.9[4]	24.4[4]
		Acetone	0.10	0.36
		Methanol	5.15[3]	18.25[3]
		Acetaldehyde	0.03	0.09
		MEK	0.03	0.08
		Toluene	0.01	0.01
18	Paper Machine Vacuum Pumps (1 thru 3)	VOC	11.7[4,5]	41.3[4,5]
		Acetone	1.26[5]	4.47[5]
		Acetaldehyde	0.90[5]	3.19[5]
		Styrene	0.09[5]	0.33[5]
		Acrolein	0.04[5]	0.12[5]
		Formaldehyde	0.24[5]	0.87[5]
		Methanol	5.15[3,5]	18.25[3,5]
19A	Paper Machine Vacuum Pump 4	VOC	7.4[4]	26.0[4]
		Acetone	0.42	1.49
		Acetaldehyde	0.30	1.07
		Acrolein	0.02	0.04
		Formaldehyde	0.09	0.29
		Styrene	0.03	0.11
		Methanol	5.15[3]	18.25[3]
		MEK	0.09	0.30
		Toluene	0.01	0.01
19B	Paper Machine Vacuum Pump 5	VOC	7.4[4]	26.0[4]
		Acetone	0.42	1.49
		Acetaldehyde	0.30	1.07
		Acrolein	0.02	0.04
		Formaldehyde	0.09	0.29
		Styrene	0.03	0.11
		Methanol	5.15[3]	18.25[3]
		MEK	0.09	0.30
		Toluene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
19C	Paper Machine Vacuum Pump 6	VOC	7.4[4]	26.0[4]
		Acetone	0.42	1.49
		Acetaldehyde	0.30	1.07
		Acrolein	0.02	0.04
		Formaldehyde	0.09	0.29
		Styrene	0.03	0.11
		Methanol	5.15[3]	18.25[3]
		MEK	0.09	0.30
		Toluene	0.01	0.01
19D	Paper Machine Vacuum Pump 7	VOC	9.5[4]	33.6[4]
		Acetone	0.84	2.98
		Acetaldehyde	0.60	2.13
		Acrolein	0.03	0.08
		Formaldehyde	0.17	0.58
		Styrene	0.06	0.21
		Methanol	5.15[3]	18.25[3]
		MEK	0.17	0.60
		Toluene	0.01	0.01
20	Green Liquor Storage Tank North	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
21	Green Liquor Storage Tank South	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
22	Multi Purpose Tank	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
23	Dregs Mixer	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
24	Dregs Washer	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
27	White Liquor Clarifier No. 2	VOC	0.2	0.5
		Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
28	East White Liquor Storage Tank and Temporary Railcars	VOC	0.2	0.5
		Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01
29	West White Liquor Storage Tank	VOC	0.2	0.5
		Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01
30	White Liquor Measuring Tank	VOC	0.2	0.5
		Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01
31	Green Liquor Clarifier No.2	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
32	Weak Wash Storage Tank	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
33	North Weak Black Liquor Tank	VOC	0.9	3.8
		TRS	0.1	0.3
		Acetone	0.02	0.07
		Acetaldehyde	0.01	0.02
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.71	3.11
		MEK	0.01	0.02
		Styrene	0.01	0.01
		Toluene	0.01	0.01
34	South Weak Black Liquor Tank	VOC	0.9	3.8
		TRS	0.1	0.3
		Acetone	0.02	0.07
		Acetaldehyde	0.01	0.02
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.71	3.11
		MEK	0.01	0.02
		Styrene	0.01	0.01
		Toluene	0.01	0.01
35	Green Liquor Clarifier No.1	VOC	0.8	3.1
		TRS	0.1	0.1
		Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
36	High Density Storage Tank No.2	VOC	0.1	0.4
		TRS	0.1	0.3
		Acetone	0.01	0.01
		Acetaldehyde	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.05	0.22
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
37	High Density Storage Tank No.3	VOC	0.1	0.4
		TRS	0.1	0.3
		Acetone	0.01	0.01
		Acetaldehyde	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.05	0.22
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
38	Strong Black Liquor Storage Tank No.2	VOC	0.2	0.8
		TRS	0.3	1.1
		Acetone	0.03	0.13
		Acetaldehyde	0.02	0.06
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Formaldehyde	0.01	0.01
		Methanol	0.13	0.57
		MEK	0.02	0.07
		Styrene	0.01	0.01
		Toluene	0.01	0.01

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
39	Black Liquor Spill Tank	VOC	0.2	0.8
		TRS	0.3	1.1
		Acetone	0.03	0.13
		Acetaldehyde	0.02	0.06
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Formaldehyde	0.01	0.01
		Methanol	0.13	0.57
		MEK	0.02	0.07
		Styrene	0.01	0.01
		Toluene	0.01	0.01
40	Paper Machine General Building Ventilation	VOC	--	36.0[4]
		TRS	--	1.3
		Acetone	--	1.24
		Methanol	--	18.25[3]
		2-Methylphenol	--	0.34
		Acetaldehyde	--	0.09
		Benzene	--	0.01
		MEK	--	0.11
		Styrene	--	0.04
		Toluene	--	0.03
41	Aeration Basin	VOC	--	13.5
		TRS	--	292.1
		Methanol	--	13.5
		Formaldehyde	--	0.01
50	Chip and Hogged Fuel Storage Piles	PM	--	0.1
		PM_{10}	--	0.1
		VOC	--	4.8

EMISSION SUMMARY

Source No.	Description	Pollutant	Emission Rates	
			lb/hr	ton/yr
51	Saveall Tank	VOC	5.5[4]	19.5[4]
		TRS	0.1	0.1
		Acetone	0.13	0.44
		Acrolein	0.02	0.07
		Methanol	5.15[3]	18.25[3]
		Acetaldehyde	0.15	0.53
		Benzene	0.01	0.01
		MEK	0.03	0.09
		Styrene	0.01	0.01
52	Outside White Water Chest	VOC	5.5[4]	19.5[4]
		TRS	0.1	0.1
		Acetone	0.13	0.44
		Acrolein	0.02	0.07
		Methanol	5.15[3]	18.25[3]
		Acetaldehyde	0.15	0.53
		Benzene	0.01	0.01
		MEK	0.03	0.09
		Styrene	0.01	0.01
53	Landfill	CO	--	0.1
		VOC	--	8.6
		TRS	--	0.1
		Acetone	--	0.02
		Acrylonitrile	--	0.01
		Benzene	--	0.01
		Carbon Disulfide	--	0.01
		Chloromethane	--	0.01
		MEK	--	0.02
		Toluene	--	0.09
		Mercury	--	0.001

EMISSION SUMMARY

Source No.	Description	Pollutant	Emission Rates	
			lb/hr	ton/yr
54	DAF Unit	VOC	5.5[4]	19.5[4]
		TRS	0.1	0.1
		Acetone	0.13	0.44
		Acrolein	0.02	0.07
		Acetaldehyde	0.15	0.53
		Benzene	0.01	0.01
		MEK	0.03	0.09
		Styrene	0.01	0.01
		Methanol	5.15[3]	18.25[3]
55	No. 3 Strong Black Liquor Storage Tank	VOC	0.2	0.8
		TRS	0.3	1.1
		Acetone	0.03	0.13
		Acetaldehyde	0.02	0.06
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Formaldehyde	0.01	0.01
		Methanol	0.13	0.57
		MEK	0.02	0.07
		Styrene	0.01	0.01
		Toluene	0.01	0.01
-	LVHC/HVLC System	-	-	-
-	Condensate Collection System	-	-	-
100	Natural Gas Fired Boiler	PM	0.1	0.1
		PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.4
		NO_x	0.1	0.5
101	Mixer Hood Exhaust	PM	2.8	6.3
		PM_{10}	2.8	6.3

EMISSION SUMMARY				
Source No.	**Description**	**Pollutant**	**Emission Rates**	
			lb/hr	**ton/yr**
102 thru 110	No. 3 Press (Tunnel Dryer & Lacquer Dryer Vents) No. 4 Press (Between Decks Dryer, Tunnel Blower, Auxiliary Blower, & Lacquer Dryer Vents) No. 5 Press (Between Decks Dryer & Tunnel Dryer Vents) General Building Ventilation	PM	0.7	0.7
		PM_{10}	0.7	0.7
		SO_2	0.7	0.7
		VOC	84.5	60.0
		CO	0.7	1.3
		NO_x	1.1	4.6
		HAP	84.5[6]	24.5[7]
		Ammonia	4.4	19.3

*HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.

**Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

[1] Total for SN-13 and SN-17.

[2] Total for entire dry end of the paper machine (SN-15A-J).

[3]. Methanol contribution (5.15 lb/hr, 18.25 tons/yr) is total methanol for all paper machine sources (SN-15, 16, 18, 19, 40, 51, 52, and 54)

[4] VOC limits include the methanol contribution from all paper machine sources.

[5].Total for Vacuum Pumps 1 through 3.

[6] Because the raw materials used at SN-102 through SN-108 contain only organic HAPs, the hourly HAP emission rate be set to the hourly VOC emission rate.

[7] The limit for any combination of HAPs applied on the flexographic printing presses is 5.29 ton/yr (40 CFR Part 63 Subpart KK). The annual limit for any single HAP is 9.5 ton/yr and for any combination of HAPs is 24.5 ton/yr, which includes the 5.29 ton/yr total HAPs applied to product on the flexographic presses.

SECTION III: PERMIT HISTORY

The mill first began operating in 1957 and was owned by Dierks Paper Company. In 1970 Weyerhaeuser Company (Weyerhaeuser) purchased the mill.

Weyerhaeuser was issued its first permit, **#385-A**, for the pulp and paper mill in Pine Bluff, Arkansas, on January 28, 1977. This permit allowed Weyerhaeuser to make several changes at the facility to reduce its dependence upon natural gas and fossil fuels and to provide improved emission controls. Weyerhaeuser installed a woodwaste fired boiler. The lime kiln, which was previously fired only with natural gas, was converted to have the capability of firing fuel oil. A wet scrubber was placed in series with an existing electrostatic precipitator (ESP) to control emissions from the recovery boiler. A black liquor oxidation system was installed to reduce total reduced sulfur (TRS) emissions. Two cyclones were installed to reduce particulate matter emissions from the facility's bark and wood chip facilities.

On July 22, 1983, Weyerhaeuser was issued its modified permit **#385-AR-1**. This permit deleted the requirement for the TRS characterization program. The condition was no longer necessary because the program had been completed. In addition, this permit deleted the requirement that Weyerhaeuser operate a black liquor oxidation system.

Pursuant to a Consent Administrative Order, Weyerhaeuser proposed to install a scrubber on their woodwaste fired boiler. This scrubber along with the existing multi-clones would enable the boiler to comply with its allowable emission rates. Permit **#385-AR-2** was issued on March 13, 1985 to allow the installation of this scrubber.

On September 11, 1987, permit **#857-A**, was issued to signify the fact that Mid-America Packaging (MAP) had purchased the Weyerhaeuser pulp and paper mill in Pine Bluff, Arkansas. This permit also allowed MAP to replace the existing scrubber and ESP on the recovery boiler with an ESP alone.

Permit **#385-AR-3** was issued on August 25, 1988. This permit indicated that Gaylord, formerly known as MAP, now operated the pulp and paper mill formerly owned by Weyerhaeuser in Pine Bluff, Arkansas. This permit allowed Gaylord to install a scrubber to control TRS emissions from the smelt dissolving tank. Gaylord was also permitted to install a system to collect non-condensible gases (NCGs) from the digesters and evaporator and incinerate them in the lime kiln as required by the 111d plan.

On June 1, 1992, Gaylord was issued permit **#385-AR-4** to allow the installation of a scrubber on the recovery boiler to control TRS.

Gaylord was issued a consolidated permit, **#385-AR-5**, on March 3, 1997. This permit included both the Gaylord pulp and paper mill in Pine Bluff, Arkansas, and the MAP bag making operations. Permit modifications included the addition of previously unpermitted sources and the addition of three new sources, specifically one fourdrinier blower and two paper machine vacuum pumps.

Permit **#385-AOP-R0**, issued on July 13, 1998, was the first Title V operating permit issued to the Gaylord Pine Bluff Mill and MAP facility under Regulation #26. Some of the emission limits in this permit differ from those found in the last permit. The following are the changes and clarifications proposed by Gaylord to be included in this permit:

- In some cases, emission factors were used to calculate the emission rates instead of stack test data to facilitate compliance through record keeping.

- Different or additional emission factors were used to calculate some emissions of VOCs and TRS.

- Non-VOC hydrocarbons were removed from the VOC totals quantified in the last permit which resulted in an apparent decrease in some VOC emission rates.

- Gaylord requested an increase in the annual black liquor solids firing rate from 159,688 tons of black liquor solids per year to 173,448 tons of black liquor solids per year. This increased number is based on the hourly rate previously calculated in the last permit and in this permit application. The proposed black liquor solids firing rate increase does not affect recovery boiler emissions because the recovery boiler emissions were based on stack testing data. The rate increase will result in slightly higher annual emissions at other sources at the mill where emission factors are used to calculate emissions. The requested change is not a result of any changes or modifications at the facility. It is merely an alternate way of calculating the yearly firing rate.

- Permit #385-AR-5 allowed Gaylord to install two paper machine vacuum pumps. Instead of installing two vacuum pumps, Gaylord installed one vacuum pump which is twice the size of the two that were proposed.

- Gaylord proposes to install two new bag machine lines at MAP to enable the facility to begin producing a different type and size of bag. The two new bag lines will require an increase in the usage of adhesives, ink and ink additives, and lacquer. The increase in emissions is calculated to be 25.2 tons per year of VOCs which is less than the PSD level of significance of 40 tons per year.

The following sources have been permanently removed from service.

Location	Description
Pine Bluff Mill	Old Turpentine Separators
Pine Bluff Mill	Old Turpentine Tank
Pine Bluff Mill	Old Lime Slaker
Pine Bluff Mill	Fuel Oil Storage Tank No. 1
Pine Bluff Mill	Fuel Oil Storage Tank No. 2
Pine Bluff Mill	Mini Mercher
Pine Bluff Mill	Barking Drum
Pine Bluff Mill	Aeration Pond Diesel Tank
MAP	Rolowash Tank

First, this permit was modified to include 40 CFR Part 63 Subpart KK - National Emissions Standards for the Printing and Publishing Industry as an applicable requirement. MAP is considered a major source for hazardous air pollutants only in conjunction with the adjacent Pulp and Paper Mill. For this reason, MAP is subject to regulation under NESHAP Subpart KK. If a facility can meet the Incidental Printing Exemption [40 CFR §63.821(b)], they are subject only to the recordkeeping and reporting requirements of the standard. MAP will comply with the Incidental Printing Exemption.

Second, this permit was modified to revise the permitted HAPs for MAP. One of MAP's ink suppliers recently changed its reporting procedures related to the percentage of HAPs in its ink/ink additives, lacquers, and adhesives. In the past the vendor reported any HAP less than 0.10% as 0.00%; the vendor now reports HAP content as low as 0.001%. Because of this change in reporting methodology, it is necessary to modify the permit to include all the HAPs listed by the vendor.

Third, this permit was modified to incorporate the results of the year long (i.e., July 1997 thru July 1998) Recovery Boiler Carbon Monoxide Emissions Study. This study was conducted in accordance with Specific Conditions #35 thru #39 contained in Permit #385-AOP-R0. These conditions required the installation and operation of a Continuous Emissions Monitoring System for the purpose of conducting a study to determine baseline carbon monoxide emissions from the Recovery Boiler (SN-02). The ultimate goal of the Study was to establish an accurate and reasonable carbon monoxide permit limit which would allow Gaylord to continue operations while maintaining compliance with federal and state air regulations. The three objectives of the Study were as follows:

(1) determine baseline clean boiler carbon monoxide emission levels;
(2) develop proposed carbon monoxide emission limits; and
(3) develop future operational procedures to ensure permit compliance.

Fourth, this permit was modified to update the control equipment operating parameters for two sources at the Pine Bluff Mill.

Fifth, this permit was modified to revise the permitting scheme of the MAP sources. In order to simplify recordkeeping and achieve the maximum operating flexibility, the emissions from SN-102 through SN-108 have been "bubbled."

Sixth, this permit was modified to include the No. 3 Strong Black Liquor Storage Tank (SN-55). This storage tank had been taken out of service. It was previously used to store used fuel oil.

Seventh, this permit was modified to revise the requirement for a backup incineration device.

The final modification includes requirements outlined in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Pulp and Paper Industry, 40 CFR Part 63, Subpart S (Cluster Rule). Changes to the permit include the collection and incineration of HVLC gases and the LVHC gases from the Foul Condensate Tank in the Lime Kiln as described in the Cluster Rule. This modification qualifies as a Pollution Control Project and therefore emission increases did not trigger PSD review requirements.

Permit **#385-AOP-R2**, issued on November 8, 2001, was a modification to the Title V operating permit issued to the Gaylord Pine Bluff Mill and MAP facility under Regulation #26. This modification clarified the wording of three specific conditions (SC #28, # 44, #60) that required monitoring of specified parameters associated with scrubber pressure. There were no emission limit increases associated with this modification.

Permit **#385-AOP-R3** was issued on May 19, 2003. Delta Natural Kraft (Delta) acquired ownership of Temple Inland Incorporated - Pine Bluff Mill on January 10, 2003. Temple purchased the Mill from Gaylord Container Corporation - Pine Bluff Mill in April 2002. This modification to the permit removed specific emission limits on hazardous air pollutants (HAPs) at the Mid-America facility and replaced former limits with a Threshold Limit Value (TLV) Table based on the TLVs and weight percentages of any HAP which may be used at this facility. In addition, the emission limits were revised to reflect the most recent volatile organic compound (VOC) and HAP contents of the adhesives, lacquers and inks used by Mid-America. Overall, the permitted annual emission rate for Ammonia increased 10.89 ton/yr, while the total permitted combined HAP emissions remained 24.5 tons/yr and the annual emission limits for the criteria pollutant emissions did not change.

Permit #**385-AOP-R4** was issued October 20, 2003. This was the first renewal of Delta's Title V permit. With all Title V renewal applications, facilities are required to submit Compliance Assurance Monitoring (CAM) Plans for affected sources. Affected sources are those which have potential, pre-control emissions of more than 100 tons per year. Delta currently operates 4 affected sources (SN-01, SN-02, SN-04, and SN-05). The CAM plans submitted by Delta for the affected sources were approved and included in the specific conditions of the permit renewal.

Combined with this renewal of the permit was a significant modification to replace an existing digester vessel (SN-17) with a new vessel, along with a minor modification (approved in July of 2003) to install a new Venturi Scrubber in series with the two scrubbers that were already in place to control emissions from SN-01 (Lime Kiln). The scrubber reduces PM emissions so that Delta would be in compliance with CAO LIS 03-029 and the permitted PM emissions from SN-01. Neither modification increased permitted emission rates; however, the replacement of the digester vessel was considered a PSD modification.

Prevention of Significant Deterioration
Delta replaced an old digester vessel, Digester No. 3 (SN-17), with a new vessel in 2003. At the time of the renewal, emission rates for all three digester vessels (SN-13 and SN-17) were re-evaluated and any changes in emission rates resulted from the updated emission factors used in re-calculating the emissions from these sources.

The replacement of the digester vessel did not trigger NSPS Subpart BB because the replacement only involved one of the digestion vessels and not associated digestion system components, the short- term emissions did not increase, and the cost on the component replacement did not exceed 50% of the cost of a new digester system. However, Delta controls gases from the digester vessels via incineration in the Lime Kiln at a temperature of at least 1200°F and a retention time of at least 0.5 second which is consistent with the requirements of §19.804 of the *Regulations of the Arkansas Plan of Implementation for Air Pollution Control* (SIP) and 40 CFR § 60.283(a)(1)(iii).

The new digester vessel was approximately 10% larger in volume than the old vessel that was previously in use. Even though the replacement is larger, the new digester did not have the potential to emit pollutants at a rate greater than the old vessel due to a bottleneck in the papermaking process created by the washing stage. Hourly and annual emissions did not increase at the digester system as a result of the digester replacement due to the conveyance limitations and other production related restrictions. Actual to potential emissions from the digester vessel were less than the PSD threshold.

The purpose of replacing the digester vessel was not to increase production or emission rates. However, sources affected by the digester included the recovery boiler, lime kiln, smelt dissolving tank, and other sources at the mill. Because these sources have not operated at permitted rates, the actual to potential emission rates from the facility exceeded the PSD threshold for PM_{10}, SO_2, CO, and NO_x, therefore, a PSD application was submitted.

BACT Analysis
A BACT analysis was conducted for the replacement of the digester vessel (SN-17). The BACT analysis addressed each pollutant subject to PSD review emitted by the unit. The BACT analysis was conducted for VOC and TRS pollutants.

In addition, the selected BACT must be at least as stringent as the NSPS for the source. In this case, the digester had to meet the VOC and TRS limits included in NSPS Subpart BB.

BACT Analysis for VOC from Digester No. 3 (SN-17)
The RACT/BACT/LAER Clearinghouse was searched for historical and transient control technologies associated with digesters. One similar digester installation subject to PSD/BACT was found. The clearinghouse identified BACT as add-on and/or pollution prevention controls for the digester. The BACT found involved routing the emissions to the lime kiln for thermal oxidation. Delta currently collects emissions from the digester and routes the emissions to the Lime Kiln. This was done to demonstrate compliance with the NESHAP Subpart S for the Pulp and Paper industry. Based upon this analysis, incinerating the VOC emissions in the Lime Kiln is selected as BACT to control the emissions of VOC from the digester.

BACT Analysis for TRS from Digester No. 3 (SN-17)
The RACT/BACT/LAER Clearinghouse was searched for historical and transient control technologies associated with digesters. One similar digester installation subject to PSD/BACT was found. The clearinghouse identified BACT as add-on and/or pollution prevention controls for the digester. The BACT found involved routing the emissions to the lime kiln for thermal oxidation. Delta currently collects emissions from the digester and routes the emissions to the Lime Kiln. This was done to demonstrate compliance with the NESHAP Subpart S for the Pulp and Paper industry. Based upon this analysis, incinerating the TRS emissions in the Lime Kiln was selected as BACT to control the emissions of TRS from the digester.

With the renewal all emission limits were revised to reflect updated emission factors and additional stack test data. Overall, the permitted annual criteria pollutant emission rates increased 17.2 tpy for PM_{10}, 12.9 for SO_2, 38.6 tpy NO_x, 97.9 tpy for TRS, and 0.013 tpy for lead and permitted emission rates decreased 23.2 tpy for VOC and 421.2 tpy for CO.

Permit **#385-AOP-R5** was issued December 21, 2006. Combined with this permit revision were two significant modifications, a minor modification, and an administrative amendment to the air permit.

The first modification allowed the installation of a new flexographic printing press (No. 5 Press) equipped with two drying chambers heated with natural gas. Each of the new drying chambers associated with the No. 5 Press were vented to the atmosphere as No. 5 Press Between Decks Dryer Vent (SN-109) and No. 5 Press Tunnel Dryer Vent (SN-110). Permitted emissions from the combustion of natural gas at MAP increased slightly as a result of the two new emission units.

The second modification incorporated the MACT II language into the permit. This modification was in accordance with Consent Administration Order LIS #05-024.

The minor modification modified allowable particulate emissions from the Recovery Boiler (SN-02), Smelt Dissolving Tank (SN-04), and the Lime Kiln (SN-01) to comply with the standards established in 40 CFR Subpart MM – National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semi-chemical Pulp Mills (Subpart MM). As per the calculations submitted by Delta in the application, Delta meets the standard for the Overall PM Limit under §63.862(a)(1)(ii). Therefore, Delta meets the standards of Subpart MM by complying with the Plantwide Bubble Limit allowed in the regulation. There was a combined permitted emission reduction of 50 tpy of PM.

Finally, an administrative amendment was performed which allowed the addition of two new tubers and two new bottomers to the MAP plant as an insignificant activity at the facility.

Overall annual permitted emissions changes resulting from the combined modifications decreased by 49.2 tons of PM/PM_{10}, 5.5 tons of NO_x, and 0.8 tons of CO; and emissions increased by 0.5 tons of SO_2, 0.6 tons of VOC, 0.7 tons of TRS, 0.02 tons of Acetaldehyde, and 0.01 tons of Acetone.

Permit **#385-AOP-R6** was issued March 21, 2007. This modification incorporated the requirements of 40 CFR Part 63, Subpart DDDDD- *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters* (Boiler MACT) into the air permit. Delta and MAP combined, operate three boilers which are subject to the standards of the Boiler MACT, the Hog Fuel Boiler (SN-05), the Power Boiler (SN-06) and a natural gas boiler (SN-100). Both SN-06 and SN-100 are classified as existing boilers that burn liquid fuel. Therefore, SN-06 and SN-100 are not subject to the emission standards under the Boiler MACT. However, if the boilers are reconstructed in the future, the boilers will be reclassified as reconstructed boilers and will have to comply with the applicable Boiler MACT standards.

The hog fuel boiler is classified as an existing, large boiler that burns solid fuel and must comply with the emission standards specified in Table 1 of the Boiler MACT by September 13, 2007. With this modification the Boiler MACT conditions and emission standards were incorporated into the specific conditions for SN-05. Delta will demonstrate compliance with the Boiler MACT through the Health Based Compliance Alternative (HBCA), performance testing and fuel analysis. Overall annual permitted emissions changes resulting from the modification decreased by 0.09 tons of beryllium, 0.02 tons of mercury, and 0.01 tons of selenium; and emissions increased by 0.107 tons of lead, 0.03 tons of cadmium, 0.18 tons of chromium, 4.23 tons of HCl, 1.84 tons of Mn, and 0.15 tons of nickel.

SECTION IV: SPECIFIC CONDITIONS

SN-13 and 17
Digester Building

Source Description

During digester cooks, the capping valve at the top of the digester is closed. Gases generated during the cooking cycle are extracted from the digester and flow to the turpentine system where the gases are condensed. The resulting turpentine is stored until being loaded into railcars. Low Volume High Concentration (LVHC) gases generated are collected and combusted in the lime kiln (SN-01).

After the completion of the cooking cycle, the cooked pulp is blown to the blow tank and the digesters are uncapped and filled again with chips and liquor for the next cook. During the filling of the digesters, the air displaced from the digesters is vented to the atmosphere. This gas stream is the source of the digester's emissions.

Digester No. 1 and Digester No. 2 are vented to the atmosphere through a common vent stack (SN-13) while Digester No. 3 is vented through a separate vent stack (SN-17). It is possible that both Digester No. 1 and Digester No. 2 could be filled during the same one hour period. Digester No. 1 and Digester No. 2 were installed in 2000 and Digester No. 3 was originally installed prior to 1976. However, the digester vessel was replaced in 2003. The installation of a new digester vessel for Digester No. 3 did undergo PSD review in 2003. The PSD review is included in this section. The digesters are not subject to NSPS Subpart BB.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #3. [Regulation 19, §19.501 et seq., effective October 15, 2007 and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	tpy
13	Digester Building Vent No. 1 & No. 2	VOC TRS	5.5 0.2	15.2 0.4
17	Digester Building Vent No. 3	VOC TRS	2.8 0.1	

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #3. [Regulation 18, §18.801, effective February 15, 1999, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	tpy
13	Digester Building Vent No. 1 & No. 2	Acetaldehyde	0.03	0.08
		Methanol	0.16	0.43
		Methyl Ethyl Ketone	0.01	0.02
		Toluene	0.01	0.01
		Acetone	0.05	0.12
17	Digester Building Vent No. 3	Acetaldehyde	0.02	
		Methanol	0.08	
		Methyl Ethyl Ketone	0.01	
		Toluene	0.01	
		Acetone	0.03	

3. The permittee shall not produce in excess of 15,066 air-dried tons of pulp (ADTP) per month or 162,608 ADTP per twelve consecutive months (equivalent to 13,593 bone-dry tons of pulp (BDTP) per month or 146,708 BDTP per twelve consecutive months.) [Regulation 19, §19.705, Regulation 18, §18.1004, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

4. Gases from the digesters (generated during the cooking cycle) must be routed to the Lime Kiln for control. [Regulation 19, §19.801 and §19.901, 40 CFR Part 52 Subpart E, and 40 CFR Part 63, § 63.446(b)]

5. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #3. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-08A, 08 and 11
Brownstock Washers System

Source Description

Delta's brownstock washing system consists of one pressure drum washer (totally enclosed) followed by three vacuum drum washers in series. Delta's three brownstock washers are enclosed by a common hood and the emissions from the washers are collected into the High Volume Low Concentration (HVLC) closed collection system. The Lime Kiln serves as the HVLC incineration device. The Brownstock Washers System was installed prior to 1976; therefore, it is not subject to NSPS Subpart BB.

The brownstock washers remove black liquor from the pulp. The black liquor is then sent to the Foam Tank (SN-11). The emissions generated from the Foam Tank are also collected into the High Volume Low Concentration (HVLC) closed collection system. The Foam Tank was installed in 1994.

The High Volume Low Concentration (HVLC) gases are collected from the Brownstock washers (SN-08), Foam Tank (SN-11), Black Liquor Filter, Rejects Surge Tank, and Hot Stock Surge Tank. These gases are sent to the Lime Kiln (SN-01) in order to comply with 40 CFR Part 63, Subpart S.

Specific Conditions

6. The non-condensible gases from the Brownstock Washers and the Foam Tank are to be enclosed and vented into a closed-vent system and routed to the Lime Kiln (SN-01) thus eliminating emissions from SN-11, SN-08A, and SN-08B. The washers shall not be vented into the atmosphere. [Regulation 19, §19.304 and 40 CFR Part 63.443(c)(4)]

SN-15A thru 15J, 16A thru 16C, 18, 19A thru 19D and 40
Papermaking Operations

Source Description

The paper machine consists of a wet end (fourdrinier) and a dry end (steam heated dryer cans). Paper machine vacuum pumps pull a vacuum on the wet end of the paper machine.

The wet end of the paper machine at Delta is equipped with three fourdrinier blowers (SN-16A thru SN-16C) and seven vacuum machine pumps (SN-18 and SN-19A thru D).

Ten exhaust fans are associated with the dry end of the paper machine (SN-15A thru SN-15J). The emissions associated with the dry end exhaust fans have been bubbled together.

Fugitive emissions from the wet end of the paper machine, including fugitives from the pulp decker, fourdrinier, press section, and associated process vessels, may exit the building through general building ventilation, SN-40 accounts for these emissions.

Specific Conditions

7. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through Specific Conditions #10 and #11. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	ton/yr
15 (A thru J)	Paper Machine Dry End Fans (1, 1A, 1B, 2, 2A, 3, 3A, 4, 5 and 6)	PM_{10}	0.3	1.4
		SO_2	0.1	0.1
		VOC	9.5*	33.8*
		CO	2.3	10.1
		NO_X	2.8	12.3
		TRS	0.3	0.8
16A	Fourdrinier Blower A	VOC	6.9*	24.4*
16B	Fourdrinier Blower B	VOC	5.8*	20.6*
16C	Fourdrinier Blower C	VOC	6.9*	24.4*

Source No.	Description	Pollutant	lb/hr	ton/yr
18	Paper Machine Vacuum Pumps (1 thru 3)	VOC	11.7*	41.3*
19A	Paper Machine Vacuum Pump 4	VOC	7.4*	26.0*
19B	Paper Machine Vacuum Pump 5	VOC	7.4*	26.0*
19C	Paper Machine Vacuum Pump 6	VOC	7.4*	26.0*
19D	Paper Machine Vacuum Pump 7	VOC	9.5*	33.6*
40	Paper Machine General Building Ventilation	VOC	--	36.0
		TRS	--	1.3

* Includes total methanol (5.15 lb/hr and 18.25 ton/yr) for all paper machine sources (SN-15, 16, 17, 18, 19, 40, 51, 52, 54).

8. The permittee shall not cause to be discharged to the atmosphere from the Paper Machine Dry End Fans (SN-15A thru SN-15J) gases which exhibit an opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Condition #10. [Regulation 18, §18.501, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

9. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through Specific Conditions #10 and #11. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	ton/yr
15 (A thru J)	Paper Machine Dry End Fans (1, 1A, 1B, 2, 2A, 3, 3A, 4, 5 and 6)	PM	0.3	1.4
		Acetaldehyde	0.57	2.02
		Acetone	0.69	2.45
		Acrolein	0.13	0.44
		Formaldehyde	0.49	1.71
		Methanol	5.15*	18.25*
		MEK	0.10	0.33
		Styrene	0.02	0.07
16A	Fourdrinier Blower A	Acetone	0.10	0.36
		Methanol	5.15*	18.25*
		Acetaldehyde	0.03	0.09
		MEK	0.03	0.08
		Toluene	0.01	0.01
16B	Fourdrinier Blower B	Acetone	0.06	0.20
		Methanol	5.15*	18.25*
		Acetaldehyde	0.04	0.12
16C	Fourdrinier Blower C	Acetone	0.10	0.36
		Methanol	5.15*	18.25*
		Acetaldehyde	0.03	0.09
		MEK	0.03	0.08
		Toluene	0.01	0.01
18	Paper Machine Vacuum Pumps (1 thru 3)	Acetone	1.26	4.47
		Acetaldehyde	0.90	3.19
		Styrene	0.09	0.33
		Acrolein	0.04	0.12
		Formaldehyde	0.24	0.87
		Methanol	5.15*	18.25*

Source No.	Description	Pollutant	lb/hr	ton/yr
19A	Paper Machine Vacuum Pump 4	Acetone	0.42	1.49
		Acetaldehyde	0.30	1.07
		Acrolein	0.02	0.04
		Formaldehyde	0.09	0.29
		Styrene	0.03	0.11
		Methanol	5.15*	18.25*
		MEK	0.09	0.30
		Toluene	0.01	0.01
19B	Paper Machine Vacuum Pump 5	Acetone	0.42	1.49
		Acetaldehyde	0.30	1.07
		Acrolein	0.02	0.04
		Formaldehyde	0.09	0.29
		Styrene	0.03	0.11
		Methanol	5.15*	18.25*
		MEK	0.09	0.30
		Toluene	0.01	0.01
19C	Paper Machine Vacuum Pump 6	Acetone	0.42	1.49
		Acetaldehyde	0.30	1.07
		Acrolein	0.02	0.04
		Formaldehyde	0.09	0.29
		Styrene	0.03	0.11
		Methanol	5.15*	18.25*
		MEK	0.09	0.30
		Toluene	0.01	0.01

Source No.	Description	Pollutant	lb/hr	ton/yr
19D	Paper Machine Vacuum Pump 7	Acetone	0.84	2.98
		Acetaldehyde	0.60	2.13
		Acrolein	0.03	0.08
		Formaldehyde	0.17	0.58
		Styrene	0.06	0.21
		Methanol	5.15*	18.25*
		MEK	0.17	0.60
		Toluene	0.01	0.01
40	Paper Machine General Building Ventilation	Acetone	--	1.24
		Methanol	--	18.25*
		2-Methylphenol	--	0.34
		Acetaldehyde	--	0.09
		Benzene	--	0.01
		MEK	--	0.11
		Styrene	--	0.04
		Toluene	--	0.03

* Includes total methanol (5.15 lb/hr and 18.25 ton/yr) for all paper machine sources (SN-15, 16, 17, 18, 19, 40, 51, 52, 54).

10. Natural gas shall be the only fuel used for the Pocket Ventilator System (exhausted through SN-15A-J). The maximum heat input of this system is 28.6 million Btu per hour and the system is only capable of firing natural gas. [The Pocket Ventilator System has been permitted at maximum capacity.] The permittee shall maintain records which demonstrate that natural gas is the only fuel fired at SN-15 A-J. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

11. The permittee shall not produce in excess of 20,708 scale weight tons of paper per month or 208,050 scale weight tons of paper per twelve consecutive months. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

12. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #11. The records shall be updated on a monthly basis. These

records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [§19.705, §18.1004, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-36 and 37
Associated Paper Machine Storage Tanks

Source Description

The following sources were all installed prior to 1976. The specifications of the Associated Paper Machine Storage Tanks are listed in the following table.

Source No.	Description	Size (gallons)
36	High Density Storage Tank No. 2	359,000
37	High Density Storage Tank No. 3	359,000

Specific Conditions

13. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #3. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	ton/yr
36	High Density Storage Tank No. 2	VOC	0.1	0.4
		TRS	0.1	0.3
37	High Density Storage Tank No. 3	VOC	0.1	0.4
		TRS	0.1	0.3

14. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #3. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	ton/yr
36	High Density Storage Tank No. 2	Acetone	0.01	0.01
		Acetaldehyde	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.05	0.22
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
37	High Density Storage Tank No. 3	Acetone	0.01	0.01
		Acetaldehyde	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.05	0.22
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

SN-12, 33, 34, 38, 39, and 55
Black Liquor Tanks

Source Description

The following sources, with the exception of the No. 3 Strong Black Liquor Storage Tank, were installed prior to 1976. An existing fuel oil tank was taken out of service and converted to the No. 3 Strong Black Liquor Storage Tank (SN-55) in 2000. The specifications of the Black Liquor Tanks are listed in the following table.

Source No.	Description	Size (gallons)
33	North Weak Black Liquor Tank	125,000
34	South Weak Black Liquor Tank	125,000
38	No. 2 Strong Black Liquor Storage Tank	352,000
39	Black Liquor Spill Tank	16,000
55	No. 3 Strong Black Liquor Storage Tank	568,000

Specific Conditions

15. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through Specific Conditions #3, #24, and #25. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	ton/yr
12	Black Liquor Oxidation Tank Stack	SO_2	0.5	1.7
		VOC	8.1	35.5
		TRS	0.9	3.6
33	North Weak Black Liquor Tank	VOC	0.9	3.8
		TRS	0.1	0.3

Source No.	Description	Pollutant	lb/hr	ton/yr
34	South Weak Black Liquor Tank	VOC	0.9	3.8
		TRS	0.1	0.3
38	No. 2 Strong Black Liquor Storage Tank	VOC	0.2	0.8
		TRS	0.3	1.1
39	Black Liquor Spill Tank	VOC	0.2	0.8
		TRS	0.3	1.1
55	No. 3 Strong Black Liquor Storage Tank	VOC	0.2	0.8
		TRS	0.3	1.1

16. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through Specific Conditions #3, #24, and #25. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	ton/yr
12	Black Liquor Oxidation Tank Stack	Acetaldehyde	0.44	1.91
		Methanol	6.54	28.62
		Benzene	0.01	0.04
		Bromomethane	0.01	0.01
		Chloromethane	0.01	0.05
		MEK	0.15	0.63
		Phenol	0.01	0.01
		Styrene	0.01	0.05
		Toluene	0.01	0.04
		Acetone	0.85	3.73
		Carbon Disulfide	0.04	0.16
33	North Weak Black Liquor Tank	Acetone	0.02	0.07
		Acetaldehyde	0.01	0.02
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.71	3.11

Source No.	Description	Pollutant	lb/hr	ton/yr
		MEK	0.01	0.02
		Styrene	0.01	0.01
		Toluene	0.01	0.01
34	South Weak Black Liquor Tank	Acetone	0.02	0.07
		Acetaldehyde	0.01	0.02
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Methanol	0.71	3.11
		MEK	0.01	0.02
		Styrene	0.01	0.01
		Toluene	0.01	0.01
38	No. 2 Strong Black Liquor Storage Tank	Acetone	0.03	0.13
		Acetaldehyde	0.02	0.06
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Formaldehyde	0.01	0.01
		Methanol	0.13	0.57
		MEK	0.02	0.07
		Styrene	0.01	0.01
		Toluene	0.01	0.01
39	Black Liquor Spill Tank	Acetone	0.03	0.13
		Acetaldehyde	0.02	0.06
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Formaldehyde	0.01	0.01
		Methanol	0.13	0.57
		MEK	0.02	0.07
		Styrene	0.01	0.01
		Toluene	0.01	0.01

Source No.	Description	Pollutant	lb/hr	ton/yr
55	No. 3 Strong Black Liquor Storage Tank	Acetone	0.03	0.13
		Acetaldehyde	0.02	0.06
		Acrolein	0.01	0.01
		Benzene	0.01	0.01
		Formaldehyde	0.01	0.01
		Methanol	0.13	0.57
		MEK	0.02	0.07
		Styrene	0.01	0.01
		Toluene	0.01	0.01

17. Gases from the evaporators must be routed to the Lime Kiln (SN-01) at all times. [§19.801, 40 CFR Part 52 Subpart E, and 40 CFR Part 63, § 63.466(b)]

18. The No. 3 Strong Black Liquor Storage Tank (SN-55) has a capacity of approximately 568,000 gallons. Only black liquor, which has a vapor pressure of < 3.5 kPa (< 0.508 psi), shall be stored in the tank. The tank is no longer subject to the requirements of 40 CFR Part 60 Subpart Kb - *Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984* due to the capacity and vapor pressure of the liquid stored in the tank. [§19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-02
Recovery Boiler

Source Description

Weak black liquor from the weak black liquor storage tanks is pumped to the black liquor evaporators where the solids content of the black liquor is increased due to evaporation of liquor. Pure steam is used as the heat source for the first evaporator while a mixture of steam and vapor is used as the heat source for subsequent evaporators. Vapor from the evaporators is collected and condensed, and the remaining non-condensable gases (NCGs) are burned in the lime kiln. Black liquor is pumped from the evaporators to the soap collection system where the soap is skimmed and stored in preparation for railcar loading. Strong black liquor from the final evaporator is pumped to strong black liquor storage.

Black liquor from strong black liquor storage is pumped to the black liquor oxidation tank where air is blown into the tank, contacting the black liquor and raising the solids content. The liquor is then pumped to the recovery boiler where it is burned, creating the heat necessary to produce steam for use throughout the mill. Smelt resulting from the combustion process falls to the bottom of the boiler and flows to the smelt dissolving tank where it is dissolved to form green liquor which is sent to the caustic area.

Natural gas is used as a secondary fuel.

The Recovery Boiler at Delta is a 100 million Btu per hour boiler. The boiler is equipped with a scrubber and an electrostatic precipitator. The Recovery Boiler is equipped with a direct contact cascade evaporator. The Recovery Boiler was installed prior to 1976 and therefore is not subject to NSPS Subpart BB.

The recovery boiler and associated control equipment is subject to the requirements of NESHAP Subpart MM. The effective date of this subpart was March 13, 2004. The subpart requires that affected sources install a COMS to monitor the ESP. However, Delta has EPA approval for alternative monitoring of the ESP. The alternative monitoring has been included in the specific conditions.

Specific Conditions

19. The permittee shall comply with all applicable parts of 40 CFR Part 63 Subpart MM (outlined in Specific Conditions #133 through #153). Subpart MM and Specific Conditions #133 through #153 outline the method for determining overall PM emission limits for affected sources (SN-01, 02, and 04) and for the installation, testing, operation,

reporting and monitoring of the wet scrubber and ESP for SN-02. [§19.703, 40 CFR Part 52, 40 CFR Part 63, Subpart MM and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

20. The permittee shall not exceed the emission rates set forth in the following table. Hourly and annual emission rates set forth in the following table (except CO) are limited by Specific Conditions #24, #25, #27 through #29, and #32 through #35. Compliance with the CO emission limits are demonstrated by compliance with Specific Condition #36. [Regulation 19, §19.501 et seq., 40 CFR §63.862(a)(1)(ii) and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	ton/yr
PM_{10}	17.0	74.5
SO_2	21.2	92.7
VOC	374.2	1,638.9
CO	7,703.6	21,420.0
NO_X	18.2	79.4

21. The permittee shall not exceed the emission rates set forth in the following table. Data from the CEMS (required by Specific Condition #31) will be used to demonstrate compliance with the TRS concentration limit (ppm) listed below. Hourly and annual emission rates set forth in the following table are limited by Specific Conditions #24, #25, #27, and #28. [Regulation 19, §19.801 et seq. and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	ton/yr
TRS	35.0	153.3
	100 ppm Measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% volume oxygen.	

22. The permittee shall not cause to be discharged to the atmosphere from the Recovery Boiler gases, which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Conditions #27 and #28. [§19.503 and 40 CFR Part 52 Subpart E]

23. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #24, #25, #27 through #29, and #32. [Regulation 18, §18.801, 40 CFR §63.862(a)(1)(ii), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	ton/yr
PM	17.0	74.5
Acetaldehyde	14.89	65.22
Acetone	9.16	40.11
Acrolein	0.03	0.12
Acrylonitrile	0.02	0.06
Aniline	0.04	0.17
Arsenic	0.01	0.01
Beryllium	0.01	0.01
Benzene	0.17	0.72
Bromomethane	0.83	3.62
Cadmium	0.01	0.01
Carbon Disulfide	0.15	0.66
Chloromethane	69.04	302.37
Chromium +6	0.01	0.01
Formaldehyde	1.30	5.70
Hydrochloric Acid	1.79	7.81
Iodomethane	0.82	3.56
Lead	0.001	0.001
Manganese	0.02	0.05
Mercury	0.001	0.001
Methanol	270.73	1185.78
MEK	0.88	3.86
2-Methylphenol	5.82	25.49
Phenol	8.80	38.54
Phosphorus	0.01	0.01
Selenium	0.01	0.01

Pollutant	lb/hr	ton/yr
Styrene	0.41	1.78
Sulfuric Acid	0.17	0.73
Toluene	0.22	0.95
Zinc	0.01	0.02

24. Black liquor solids shall be the primary fuel for the recovery boiler. Natural gas may be used as a secondary fuel. The recovery boiler is only capable of firing black liquor solids and natural gas. The permittee shall maintain records which demonstrate that black liquor solids and natural gas are the only fuels fired at the recovery boiler. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [§18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

25. The permittee shall not fire in excess of 14,731 tons of black liquor solids per month or 173,448 tons of black liquor solids per twelve consecutive months to the Recovery Boiler. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

26. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #25. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month's individual data shall by submitted in accordance with General Provision #7. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 52 Subpart E]

27. The permittee shall monitor the scrubber liquor flow rate to the TRS scrubber. The liquid flow rate shall be maintained at a minimum of 1,524 gpm as determined during the initial performance test. [Regulation 19, §19.303; 40 CFR Part 64; 40 CFR §63.8(f)(2)(i), 40 CFR §63.864 (e)(10), (k)(1), (k)(2); and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

    A. When the Recovery Boiler is operating, the liquid flow rate monitor at the scrubber will measure and record the scrubber liquid flow rate at least once every successive 15-minute period and must be certified by the manufacturer to be accurate to within ±5 percent of the design liquid flow rate.

B. The permittee shall implement corrective action when any 3-hour average scrubber liquid flow rate is below 1,524 gpm.

C. The permittee shall be considered in violation of the MACT II standard when six or more 3-hour average liquid flow rate values are below 1,524 gpm within any 6-month reporting period.

28. The permittee shall monitor the airflow across the TRS scrubber. The airflow across the scrubber shall be maintained, thus indicating operation of the scrubber fan. [Regulation 19, §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

    a. When the Recovery Boiler is operating, the airflow across the scrubber will be measured and recorded at least once every successive 15-minute period.

    b. The permittee shall implement corrective action when any measurement of airflow across the scrubber results in zero airflow.

29. The permittee shall monitor the secondary power at each of the four ESP fields. The total secondary power across the four fields shall be maintained at a minimum of 43.1 kW as determined during the initial performance test. [Regulation 19, §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

    a. When the Recovery Boiler is operating, the monitors at each field of the ESP shall measure and record secondary voltage and current (thus resulting in total secondary power) at least once every successive 15-minute period.

    b. The permittee shall implement corrective action when the total secondary power across the ESP falls below 43.1 kW.

    c. In the event that two of the four fields in the ESP are not operating, the permittee shall stop firing black liquor solids within 15 minutes of the second field ceasing to operate.

30. The permittee shall maintain records which demonstrate compliance with Specific Conditions #27, #28, and #29. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [§19.705, 40 CFR Part 64, and 40 CFR Part 52 Subpart E]

31. The permittee shall continue to operate and maintain CEMs which record the TRS concentration of gases leaving the Recovery Boiler. The TRS monitors shall be operated in accordance with the requirements of 40 CFR 60.284 (date of installation not withstanding) and the Department Continuous Emission Monitoring Systems Conditions (See Appendix A). [§19.801, 40 CFR Part 64, and 40 CFR Part 52 Subpart E]

32. The permittee shall test the Recovery Boiler for PM/PM_{10} during the first year of each 5-year permit cycle. Testing shall be performed in accordance with Plantwide Condition #3. The permittee will perform the PM test using EPA Reference Methods 5 and 202. The permittee will perform the PM_{10} test using either EPA Reference Methods 201A and 202 or 5 and 202. By using Method 5 and 202 for PM_{10}, the facility will assume all collected particulate is PM_{10}. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity can not be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. Testing shall be used to demonstrate compliance with permitted emission rates. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

33. The permittee shall test the Recovery Boiler for SO_2 during the first year of each 5-year permit cycle. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 6C. Testing shall be used to demonstrate compliance with permitted emission rates. [§19.702 and 40 CFR Part 52 Subpart E]

34. The permittee shall test the Recovery Boiler for VOC during the first year of each 5-year permit cycle. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 25A. Testing shall be used to demonstrate compliance with permitted emission rates. [§19.702 and 40 CFR Part 52 Subpart E]

35. The permittee shall test the Recovery Boiler for NO_X during the first year of each 5-year permit cycle. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 7E. Testing shall be used to demonstrate compliance with permitted emission rates. [§19.702 and 40 CFR Part 52 Subpart E]

Carbon Monoxide Specific Conditions

36. The permittee shall continue to operate a Continuous Emissions Monitor (CEM) for carbon monoxide on the Recovery Boiler. The CEM shall be operated in accordance with the Department Continuous Emission Monitoring Systems Conditions except where a specific requirement is given by this permit. A copy of the Department Continuous Emission Monitoring Systems Conditions is provided in Appendix A. A 24-hour averaging period will be used for compliance demonstration purposes. [§19.703, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

37. Operational and maintenance procedures will be conducted as necessary to maintain CO emissions below permitted levels. [§19.705, 40 CFR Part §70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

38. The permittee shall maintain records which demonstrate compliance with the Specific Condition #37. [§19.705 and 40 CFR Part 52 Subpart E]

SN-04
Smelt Dissolving Tank

Source Description

The recovery operations recover spent cooking chemicals for reuse in the digesters. Smelt resulting from the combustion process flows to the smelt dissolving tank (SN-04) where it is dissolved to form green liquor which is sent to the caustic area. Gases emitted during the dissolving process are cleaned in a scrubber and discharged.

The Smelt Dissolving Tank was installed prior to 1976 and therefore is not subject to NSPS Subpart BB. The Smelt Dissolving Tank is equipped with a scrubber which was installed in 1988.

The Smelt Dissolving Tank and associated controls are subject to NESHAPS Subpart MM. The compliance date was March 13, 2004.

Specific Conditions

39. The permittee shall comply with all applicable requirements of 40 CFR Part 63 Subpart MM (outlined in Specific Conditions #133 through #153). Subpart MM and Specific Conditions #133 through #153 outline the method for determining overall PM emission limits for affected sources (SN-01, 02, and 04) and for the installation, testing, operation, reporting and monitoring of the wet scrubber for SN-04. [§19.703, 40 CFR Part 52, 40 CFR Part 63, Subpart MM and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

40. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #3, #25, #45 and #46. [Regulation 19, §19.501 et seq., 40 CFR §63.862(a)(1)(ii), and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	ton/yr
PM_{10}	6.5	28.5
SO_2	0.4	1.4

Pollutant	lb/hr	ton/yr
VOC	3.8	16.3
NO_X	0.7	2.9

41. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #3, #25, and #44. [Regulation 19, §19.801 et seq. and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	ton/yr
TRS	0.7	3.0
	0.0168 g/kg measured as grams of H_2S per kilogram of black liquor solids on a 12 hour average	

42. The permittee shall not cause to be discharged to the atmosphere from the Smelt Dissolving Tank gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Conditions #45 and #46. [§19.503 and 40 CFR Part 52 Subpart E]

43. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #3, #25, #45 and #46. [Regulation 18, §18.801, 40 CFR §63.862(a)(1)(ii), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	ton/yr
PM	6.5	28.5
Benzene	0.01	0.04
Bromomethane	0.01	0.01
Carbon Disulfide	0.01	0.01
Chloromethane	0.01	0.01
MEK	0.05	0.20
Styrene	0.01	0.02
Toluene	0.01	0.02
Acetone	0.11	0.46

Pollutant	lb/hr	ton/yr
Ammonia	0.97	4.25
Barium	0.01	0.01
Chromium +6	0.01	0.01
Copper	0.01	0.01
Methanol	3.22	14.10
Phosphorus	0.01	0.02
Silver	0.01	0.01
Thallium	0.01	0.01
Zinc	0.01	0.01

44. The permittee shall continue to conduct annual compliance testing of TRS emissions from the Smelt Dissolving Tank. Testing shall be conducted in accordance with Plantwide Condition #3 and EPA Reference Method 16. Data reduction shall be performed as set forth in 40 CFR 60.8. [§19.801 and 40 CFR Part 52 Subpart E]

45. The permittee shall monitor the pressure differential across the scrubber. The pressure differential shall be maintained at a minimum of 2.9 inches of water as determined during the initial performance test. [Regulation 19, §19.303, 40 CFR Part 64, 40 CFR §638(f)(2)(i), 40 CFR §63.864 (e)(10), (k)(1), (k)(2); and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
    a. When the Smelt Dissolving Tank is operating, the pressure differential monitor at the scrubber will measure and record the pressure differential at least once every successive 15-minute period and must be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (±2 inches of water gage pressure)
    b. The permittee shall implement corrective action when any 3-hour average pressure differential is below 2.9 inches of water.
    c. The permittee shall be considered in violation of the MACT II standard when six or more 3-hour average pressure differential values are below 2.9 inches of water within any 6-month reporting period.

46. The permittee shall monitor the liquid flow rate across the scrubber. The liquid flow rate shall be maintained at a minimum of 25.6 gpm as determined during the initial performance test. [Regulation 19, §19.303, 40 CFR Part 64, 40 CFR §638(f)(2)(i), 40 CFR §63.864 (e)(10), (k)(1), (k)(2); and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

a. When the Smelt Dissolving Tank is operating, the liquid flow rate monitor at the scrubber will measure and record the scrubber liquid flow rate at least once every successive 15-minute period and must be certified by the manufacturer to be accurate to within ±5 percent of the design liquid flow rate.
b. The permittee shall implement corrective action when any 3-hour average scrubber liquid flow rate is below 25.6 gpm.
c. The permittee shall be considered in violation of the MACT II standard when six or more 3-hour average liquid flow rate values are below 25.6 gpm within any 6-month reporting period.

47. The permittee shall maintain records which demonstrate compliance with Specific Conditions #45 and #46. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [§19.705, 40 CFR Part 64, and 40 CFR Part 52 Subpart E]

SN-03, 10, 14, 23, 24, 27, 31 and 35
Caustic Area

Source Description

Green liquor passes through a clarifier (SN-31 and SN-35) which removes dregs before it is sent to storage (SN-20 and SN-21). Clarified green liquor is then sent to the slaker (SN-03) where fresh lime and reburned lime are added to form sodium hydroxide and calcium carbonate. The dregs are washed with water and discarded to the sewer (SN-23 and SN-24).

This white liquor slurry then passes through the causticizers before entering a clarifier. Here lime mud is separated from the white liquor. The white liquor is sent to storage to be used in the pulping process. Diluted lime mud is then washed with water, the cake is collected in a filter (SN-14), and the cake is fed to the lime kiln (SN-01). The reburned lime is sent to storage. Delta purchases fresh lime to be used as make up for the reburned lime. The fresh lime is delivered and unloaded by a pneumatic truck. Air is blown into the storage compartment of the truck to force the lime from the storage compartment into the lime silo (SN-10).

Specific Conditions

48. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #60. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	ton/yr
03	Lime Slaker	PM_{10}	3.0	13.1
		VOC	0.7	2.7
		TRS	0.1	0.1
10	Fresh Lime Storage Bin	PM_{10}	55.0	5.0
14	Lime Mud Filter Vacuum Pump	VOC	0.3	1.0
		TRS	0.1	0.1
23	Dregs Mixer	VOC	0.8	3.1
		TRS	0.1	0.1
24	Dregs Washer	VOC	0.8	3.1
		TRS	0.1	0.1
27	White Liquor Clarifier No. 2	VOC	0.2	0.5

Source No.	Description	Pollutant	lb/hr	ton/yr
31	Green Liquor Clarifier No. 2	VOC	0.8	3.1
		TRS	0.1	0.1
35	Green Liquor Clarifier No. 1	VOC	0.8	3.1
		TRS	0.1	0.1

49. The permittee shall not cause to be discharged to the atmosphere from the Slaker (SN-03) gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Condition #50. [§19.503 and 40 CFR Part 52 Subpart E]

50. Daily observations of the opacity from the Slaker shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained, but not necessarily certified, in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request. [§19.705 and 40 CFR Part 52 Subpart E]

    A. The date and time of the observation.
    B. If visible emissions which appeared to be above the permitted limit were detected.
    C. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedence of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
    D. The name of the person conducting the opacity observations.

51. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #60. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	ton/yr
03	Lime Slaker	PM	3.0	13.1
		Acetaldehyde	0.31	1.19
		Acetone	0.11	0.43
		Ammonia	1.60	6.26
		Benzene	0.01	0.01
		MEK	0.01	0.03
		Styrene	0.01	0.03
		Toluene	0.01	0.01
		Methanol	0.31	1.19
10	Fresh Lime Storage Bin	PM	55.0	5.0
14	Lime Mud Filter Vacuum Pump	Acetone	0.02	0.05
		Acetaldehyde	0.01	0.01
		Methanol	0.20	0.79
		MEK	0.01	0.03
		Styrene	0.01	0.01
		Toluene	0.01	0.01
23	Dregs Mixer	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
24	Dregs Washer	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

Source No.	Description	Pollutant	lb/hr	ton/yr
27	White Liquor Clarifier No. 2	Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01
31	Green Liquor Clarifier No. 2	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
35	Green Liquor Clarifier No. 1	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

SN-20, 21, 22, 28, 29, 30 and 32
Caustic Area Tanks

Source Description

All of the following Caustic Area Tanks were installed prior to 1976. The Weak Wash Storage Tank (SN-32) stores weak wash which is diluted green liquor. The Multi Purpose Tank (SN-22) stores weak wash, white liquor or green liquor. The specifications of the Caustic Area Tanks are listed in the following table.

Source No.	Description	Size (gallons)
20	Green Liquor Storage Tank North	70,000
21	Green Liquor Storage Tank South	70,000
22	Multi-Purpose Tank	70,000
28	East White Liquor Storage Tank	70,000
29	West White Liquor Storage Tank	70,000
30	White Liquor Measuring Tank	9,490
32	Weak Wash Storage Tank	70,000

Specific Conditions

52. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #60. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	ton/yr
20	Green Liquor Storage Tank North	VOC	0.8	3.1
		TRS	0.1	0.1
21	Green Liquor Storage Tank South	VOC	0.8	3.1
		TRS	0.1	0.1
22	Multi Purpose Tank	VOC	0.8	3.1
		TRS	0.1	0.1
28	East White Liquor Storage Tank	VOC	0.2	0.5

Source No.	Description	Pollutant	lb/hr	ton/yr
29	West White Liquor Storage Tank	VOC	0.2	0.5
30	White Liquor Measuring Tank	VOC	0.2	0.5
32	Weak Wash Storage Tank	VOC	0.8	3.1
		TRS	0.1	0.1

53. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #60. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	ton/yr
20	Green Liquor Storage Tank North	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
21	Green Liquor Storage Tank South	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01
22	Multi Purpose Tank	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

Source No.	Description	Pollutant	lb/hr	ton/yr
28	East White Liquor Storage Tank and Temporary Railcars	Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01
29	West White Liquor Storage Tank	Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01
30	White Liquor Measuring Tank	Acetone	0.01	0.02
		Benzene	0.01	0.01
		Formaldehyde	0.02	0.05
		Methanol	0.09	0.34
		MEK	0.01	0.01
		Styrene	0.01	0.01
32	Weak Wash Storage Tank	Acetone	0.01	0.04
		Methanol	0.75	2.91
		Acetaldehyde	0.01	0.01
		MEK	0.01	0.01
		Styrene	0.01	0.01
		Toluene	0.01	0.01

SN-01
Lime Kiln

Source Description

The Lime Kiln at Delta has a heat input capacity of 65 million Btu per hour. The Lime Kiln was installed prior to 1976; therefore, it is not subject to NSPS Subpart BB. The Lime Kiln is equipped with three scrubbers and is natural gas fired. The Lime Kiln is currently the only incineration device for non-condensible gases (NCGs) at Delta. NESHAP Subpart S requires that all Low Volume High Concentration (LVHC) and High Volume Low Concentration (HVLC) gases be controlled within a closed-vent system and incinerated. These gases are sent to the Lime Kiln. Applicable conditions for the HVLC/LVHC system are listed as a separate source group and begin on page #97 and the source group for the Condensate Collection System begins on page #101.

The Lime Kiln and associated control equipment (wet scrubber) are subject to NESHAP Subpart MM. The compliance date for this subpart was March 13, 2004. The conditions for this subpart are listed in a separate source category, beginning on Page #105 of this permit.

Green liquor passes through a clarifier, which removes dregs before it is sent to storage. Clarified green liquor is then sent to the slaker where fresh lime and reburned lime are added to form sodium hydroxide and calcium carbonate. The dregs are washed with water and discarded to the sewer.

The white liquor slurry then passes through the causticizers before entering a clarifier. Here lime mud is separated from the white liquor. The white liquor is sent to storage to be used in the pulping process. Dilute lime mud is then washed with water, the cake is collected in a filter, and the cake is fed to the lime kiln. The reburned lime is sent to storage.

Heat is provided to the lime kiln by burning natural gas along with non-condensable gas (NCG) collected from the mill. Flue gases from the lime kiln pass through three scrubbers in series to remove dust before being discharged to the atmosphere.

Effective March 13, 2005, the Lime Kiln (SN-01) must comply with applicable provisions of NESHAP Subpart MM - *for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills* (Appendix G). Compliance with Subpart MM will take the place of the CAM plan for SN-01 upon the compliance date.

Specific Conditions

54. The permittee shall comply with all applicable requirements of 40 CFR Part 63 Subpart MM (outlined in Specific Conditions #133 through #153). Subpart MM and Specific Conditions #133 through #153 outline the method for determining overall PM emission limits for affected sources (SN-01, 02, and 04) and for the installation, testing, operation, reporting and monitoring of the scrubber for SN-01. [§19.703, 40 CFR Part 52, 40 CFR Part 63, Subpart MM and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

55. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #3, #59, #60, #62, #63, and #70. [Regulation 19, §19.501 et seq., 40 CFR §63.862(a)(1)(ii), and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	ton/yr
PM_{10}	7.0	30.7
SO_2	6.3	9.2
VOC	3.5	12.7
CO	2.1	8.2
NO_X	12.5	48.8
Pb	0.003	0.011

56. The permittee shall not exceed the emission rates set forth in the following table. Data from the CEMS (required by Specific Condition #68) will be used to demonstrate compliance with the TRS concentration limit (ppm) listed below. Hourly and annual emission rates set forth in the following table are limited by Specific Conditions #3, #59 and #60. [Regulation 19, §19.801 and 40 CFR Part 52 Subpart E]

Pollutant	lb/hr	ton/yr
TRS	3.4	14.9
	40 ppm measured as H_2S on a dry basis and on a twelve hour average, corrected to 10% volume oxygen	

57. The permittee shall not cause to be discharged to the atmosphere from the Lime Kiln gases which exhibit an opacity greater than 20%. The opacity shall be measured in

accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Conditions #62 and #63. [§19.503 and 40 CFR Part 52 Subpart E]

58. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #3, #59, #60, #62, #63, and #70. [Regulation 18, §18.801, 40 CFR §63.862(a)(1)(ii), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	ton/yr
PM	7.0	30.7
Acetaldehyde	0.09	0.35
Acetone	0.14	0.52
Acrolein	0.01	0.02
Barium	0.01	0.01
Benzene	0.01	0.03
Bromomethane	0.01	0.01
Carbon Disulfide	0.01	0.01
Chloromethane	0.01	0.04
Formaldehyde	0.07	0.27
Chromium +6	0.01	0.01
Copper	0.01	0.01
Methanol	1.46	5.02
MEK	0.02	0.05
2-Methylphenol	0.01	0.03
Phenol	0.01	0.02
Phosphorus	0.05	0.17
Silver	0.01	0.01
Styrene	0.01	0.02
Thallium	0.01	0.01
Toluene	0.02	0.06
Zinc	0.01	0.02

59. Natural gas shall be the only fuel used in the Lime Kiln. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

60. The permittee shall not use in excess of 4,143 tons of lime (reburned lime + fresh lime) per month or 44,717 tons of lime (reburned lime + fresh lime) per twelve consecutive months. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

61. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #60. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month total and each month's individual data shall by submitted in accordance with General Provision #7. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

62. The permittee shall monitor the pressure differential across the AP Tech (Venturi) scrubber. The pressure differential shall be maintained at a minimum of 22.4 inches of water as determined during the initial performance test. [Regulation 19, §19.303; 40 CFR Part 64; 40 CFR §63.8 (f)(2)(i); 40 CFR §63.864 (e)(10), (k)(1), (k)(2); and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

    a. When the Lime Kiln is operating the pressure drop monitor at the scrubber will measure and record the pressure differential at least once every successive 15-minute period and must be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (±2 inches of water gage pressure).
    b. The permittee shall implement corrective action when any 3-hour average pressure differential is below 22.4 inches of water.
    c. The permittee shall be considered in violation of the MACT II standard when six or more 3-hour average pressure differential values are below 22.4 inches of water within any 6-month reporting period.

63. The permittee shall monitor the liquid flow rate across the AP Tech (Venturi) scrubber. The liquid flow rate shall be maintained at a minimum of 147.6 gpm as determined during the initial performance test. [Regulation 19, §19.303; 40 CFR Part 64; 40 CFR §63.8 (f)(2)(i); 40 CFR §63.864 (e)(10), (k)(1), (k)(2); and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

    a. When the Lime Kiln is operating, the liquid flow rate monitor at the scrubber will measure and record the scrubber liquid flow rate at least once every successive

15-minute period and must be certified by the manufacturer to be accurate to within ±5 percent of the design liquid flow rate.

b. The permittee shall implement corrective action when any 3-hour average scrubber liquid flow rate is below 147.6 gpm.

c. The permittee shall be considered in violation of the MACT II standard when six or more 3-hour average liquid flow rate values are below 147.6 gpm within any 6-month reporting period.

64. The permittee shall maintain records which demonstrate compliance with Specific Conditions #62 and #63. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [§19.705, 40 CFR Part 64, and 40 CFR Part 52 Subpart E]

65. The permittee shall maintain a temperature of at least 1200°F and a residence time of at least 0.5 seconds at all times for gases in the Lime Kiln. The NCG burner at the Lime Kiln is the primary incineration device for non-condensible gases (NCGs). [§19.801 and 40 CFR Part 52 Subpart E]

66. The Lime Kiln is to be operated at all times. If, for any reason, the Lime Kiln is shut down, the date, time, duration of shutdown, and the reason for shutdown will be recorded. Records shall be kept on site and shall be provided to Department personnel upon request. If the shutdown is not categorized as a startup, shutdown, or malfunction, it will contribute to the four percent limit outlined in Specific Condition #67. [§19.801 and 40 CFR Part 52 Subpart E]

67. The permittee shall record and report on a semi-annual basis, periods of excess emissions for which time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed four percent. Delta will not be required to install a backup incinerator as part of the 111d plan as long as Delta complies with the MACT standards set forth in 40 CFR Part 63 Subpart S. In the event that the four percent downtime requirement is exceeded, Delta will be required to install a backup incineration device within 6 months. [§19.304 and 40 CFR §63.443(e)(3)]

68. The permittee shall continue to operate and maintain CEMs which record the TRS concentration of gases leaving the Lime Kiln. The TRS monitors shall be operated in accordance with the requirements of 40 CFR §60.284 (date of installation not withstanding) and the Department Continuous Emission Monitoring Systems Conditions (Appendix A). [§19.801 and 40 CFR Part 52 Subpart E]

69. The permittee shall introduce the LVHC and HVLC HAP emission streams from the closed-vent system into the flame zone of the Lime Kiln or with the primary fuel. [§19.304, and 40 CFR Part 63, Subpart S, §63.443(d)(4)]

70. The permittee shall test the Lime Kiln for PM and PM_{10} once every five years. Testing shall be performed in accordance with Plantwide Condition #3. The permittee will perform the PM test using EPA Reference Methods 5 and 202. The permittee will perform PM_{10} test using either EPA Reference Methods 201A and 202 or 5 and 202. By using Method 5 and 202 for PM_{10}, the facility will assume all collected particulate is PM_{10}. Testing shall be used to demonstrate compliance with permitted emission rates. Upon failure of a stack test, the permittee shall stack test annually at the Lime Kiln until two consecutive years are below the limits specified in Specific Condition #55. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity can not be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

SN-41
Wastewater Treatment Aeration Basin

Source Description

Effluent from the mill flows through a ditch to a clarifier where solids are allowed to settle. Clarified water flows to the aeration pond where aerators provide agitation and oxygen to the water. Treated water is discharged to the Arkansas River.

The pulping condensate streams from some, but not necessarily all, of the following equipment will be collected in a hard piping system and routed to the Aeration Basin (SN-41) for biological treatment: Multiple Effect Evaporator Hotwell, Turpentine Underflow Standpipe, Blow Heat Accumulator Overflow, and NCG HVLC Condenser Seal Tank.

Emissions are not based on production, throughput, or usage rates. The NCASI Organic Compound Elimination Pathway Model was used to estimate emissions from Delta's wastewater treatment aeration basin.

Specific Conditions

71. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	--	13.5
TRS	--	292.1

72. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methanol	--	13.5
Formaldehyde	--	0.02

73. Once every calendar quarter, the permittee shall model emissions from the Aeration Basin to demonstrate compliance with the permitted emission limits. The permittee shall

take a 24-hour composite sample of water entering the Aeration Basin and the sample shall be analyzed for methanol, formaldehyde and total sulfides. The composite sample will consist of a sufficient number of grab samples to accurately characterize the water over a 24-hour period. On the day the composite sample is taken, the permittee shall also record the daily flow rate of the water leaving the Aeration Basin. The concentration and flow data shall be used as inputs for the model. The current physical and operational characteristics of the Aeration Basin shall also be used as model inputs. [§19.703, 40 CFR Part 52, §18.1003, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

The permittee shall maintain records of sample concentration, flow rate data, model results, and total quarterly emissions calculations. Compliance shall be determined using a 4 quarter rolling sum. Records shall be updated by the last day of the month following the calendar quarter, kept on site and provided to Department personnel upon request.

74. The pulping process condensates from some but not necessarily all of the following equipment shall be sent through a hard piping system and delivered to the Aeration Basin for biological treatment: [§19.304 and 40 CFR Part 63, Subpart S, §63.446(b)]
    a. Multiple Effect Evaporator Hotwell;
    b. Turpentine Underflow Standpipe;
    c. Blow Heat Accumulator Overflow; and
    d. NCG HVLC Condenser Seal Tank.

75. The permittee shall discharge the collected pulping process condensate streams below the liquid surface of the Aeration Basin and treat the pulping process condensates to meet the requirements specified in (A) or (B) below: [§19.304 and 40 CFR Part 63, Subpart S, §63.446(e)(2)]
    a. On an individual HAP basis, using the procedures specified in 63.457(l)(1) or (2), either:
        i. Reduce methanol by 92 percent or more by weight and reduce acetaldehyde, methyl ethyl ketone (MEK), and propionaldehyde each by 99 percent or more by weight; or
        ii. Remove 3.3 kilograms or more of methanol per megagram (6.6 pounds per ton) of ODP, remove 0.034 kilograms or more of acetaldehyde per megagram (0.067 pounds per ton) of ODP, remove 0.017 kilograms or more of MEK per megagram (0.034 pounds per ton) of ODP, and remove 0.003 kilograms or more of propionaldehyde per megagram (0.0067 pounds per ton) of ODP.

    b. On a methanol basis, using the test procedures in 63.457(l)(3) or (4) to determine the additional condensates to be treated, either:

i. Reduce methanol by 92 percent or more by weight; or
ii. Remove 3.3 kilograms or more of methanol per megagram (6.6 pounds per ton) of ODP.

76. The permittee shall perform the daily monitoring procedures specified in either (a) or (b) below: [§19.304 and 40 CFR Part 63, Subpart S, §63.453(j)(1) and (2)]
    a. On a daily basis, monitor the following parameters for the Aeration Basin:
        1. Composite daily sample or outlet soluble BOD concentration to monitor for maximum daily and maximum monthly average;
        2. Mixed liquor volatile suspended solids;
        3. Horsepower of aerator unit(s);
        4. Inlet liquid flow;
        5. Liquid temperature;
        6. Comply with the monitoring and sampling requirements contained within 63.453(j)(1)(ii).
    b. As an alternative to the monitoring requirements in part (A) of this condition, conduct daily monitoring of the site-specific parameters established according to the procedures specified in Specific Condition #78.

77. The permittee shall conduct a performance test within 45 days after the beginning of each quarter and meet the applicable emission limit outlined in Specific Condition #78. [§19.304 and 40 CFR Part 63, Subpart S, §63.453(j)(3)]
    a. The performance test conducted in the first quarter (annually) shall be performed for total HAP and the percent reduction or mass removal obtained from the test shall be at least as great as the total HAP percent reduction or mass removal specified in Specific Condition #75.
    b. The remaining quarterly performance tests shall be performed for either methanol or total HAP and the percent reduction or mass removal obtained from the test shall be at least as great as the methanol or total HAP percent reduction or mass removal determined in the previous first-quarter test specified in part (A) of this condition.

78. To establish or reestablish the value for each operating parameter required to be monitored under Specific Condition #76 and #77, the permittee shall use the following procedures: [§19.304 and 40 CFR Part 63, Subpart S, §63.453(n)]
    a. The operating parameter shall be continuously recorded during the initial performance test or any subsequent performance tests;
    b. 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;

c. The owner or operator shall provide for the Department's approval the rationale for selecting the monitoring parameters necessary to comply with Specific Condition #76;

d. Provide for the Department'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.

79. Operation of the basin in conjunction with the condensate collection system below minimum operation parameter values or above maximum operating parameter values established under Subpart S or failure to perform procedures required shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions. Instances where emissions are in excess of the appropriate standard, but are caused by events identified in the mill's Startup, Shutdown, and Malfunction plan (required by 40 CFR Part 63.6), will not be considered in the calculation of periods of excess emissions. [§19.304 and 40 CFR Part 63, Subpart S, §63.453(o)]

80. The permittee shall perform all requirements of 63.453(p)(1) and (2) at any point in which monitoring parameters specified in Specific Condition #76 are below minimum operating parameter values or above maximum operating parameter values. [§19.304 and 40 CFR Part 63, Subpart S, §63.453(p)]

81. Liquid samples shall be collected using the sampling procedures specified in Method 305 of Part 60, Appendix A, including the following: [§19.304 and 40 CFR Part 63, Subpart S, §63.457(c)(1)]

a. Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere;

b. Otherwise, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

82. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements. [§19.304 and 40 CFR Part 63, Subpart S, §63.457(c)(2)]

83. When gathering liquid samples for HAP analysis, the permittee 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: [§19.304 and 40 CFR Part 63, Subpart S, §63.457(c)(3)]

a. Method 305 in Appendix A adjusted using the equation contained in 63.457(c)(3)(i); or
b. NCASI Method DI/MEOH-94, 02, Methanol in Process Liquids by GC/FID, August 1998, Methods Manual, NCASI, Research Triangle Park, NC, for determining methanol concentrations.
c. NCASI Method DI/HAPS-99,01, Selected HAPS in condensates by GC/FID, to analyze methanol, acetaldehyde, methyl ethyl ketone, and propionaldehyde in condensate streams. A copy of EPA approval letter can be found in Appendix F.

84. The permittee shall use Method 405.1 of Part 136 to determine soluble BOD in the effluent stream from a biological treatment unit with the modifications contained in 63.457(c)(4)(i) and (ii). [§19.304 and 40 CFR Part 63, Subpart S, §63.457(c)(4)]

85. The permittee shall perform the procedures contained within 63.457(c)(5) and (6) if the measured concentration HAP in a liquid stream is not detectable. [§19.304 and 40 CFR Part 63, Subpart S, §63.457(c)(5)and (6)]

86. The permittee shall measure the total HAP concentration as methanol except as specified in Specific Condition #75. [§19.304 and 40 CFR Part 63, Subpart S, §63.457(g)]

87. Compliance for the mass flow rate and mass per megagram of ODP for liquid streams shall be demonstrated by using the equations outlined in 63.457(j)(1) and (2). [§19.304 and 40 CFR Part 63, Subpart S, §63.457(j)]

88. To determine compliance with an open biological treatment system option in Specific Condition #75, the permittee shall comply with 63.457(l)(1) through (5). [§19.304 and 40 CFR Part 63, Subpart S, §63.457(l)]

89. The permittee shall store inlet and outlet grab samples required to be collected in Specific Condition #87 at 4°C (40°F) to minimize the biodegredation of the organic compounds in the sample. [§19.304 and 40 CFR Part 63, Subpart S, §63.457(n)]

SN-05
Hog Fuel Boiler

Source Description

The Hog Fuel Boiler is a 160 million Btu per hour boiler. The boiler is able to burn natural gas and hog fuel (including bark, DLK scrap, secondary fiber rejects, and sawdust used for cleaning small oil spills). The Hog Fuel Boiler was installed prior to 1976. The boiler has never been modified and is therefore not subject to regulation under NSPS Subpart Db. The boiler is equipped with a scrubber and a multicyclone. The scrubber was installed in 1985.

Specific Conditions

90. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #93, #94, #96, #97, #98, and #99. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	53.6	234.7
SO_2	4.0	17.6
VOC	7.1	31.1
CO	197.6	865.2
NO_x	42.7	147.9
Pb	0.03	0.14

91. The permittee shall not cause to be discharged to the atmosphere from the Hog Fuel Boiler gases which exhibit opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Condition #99. [§19.503 and 40 CFR Part 52 Subpart E]

92. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #93,

#94, #96, and #99. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	ton/yr
PM	53.6	234.7
Acetone	0.01	0.03
Acetaldehyde	0.02	0.08
Acrolein	0.01	0.01
Barium	0.06	0.23
Benzene	0.01	0.05
Beryllium	0.0004	0.0018
Cadmium	0.008	0.035
Carbon Disulfide	0.03	0.10
Chloromethane	0.01	0.04
Chromium	0.04	0.18
Chromium +6	0.01	0.01
Copper	0.01	0.03
Formaldehyde	0.06	0.24
Hydrochloric Acid	1.02	4.47
Manganese	0.54	2.37
MEK	0.01	0.01
Methanol	0.23	0.99
Mercury	0.0003	0.0014
Nickel	0.0324	0.142
Phenol	0.01	0.01
Phosphorus	0.03	0.12
Silver	0.01	0.02
Styrene	0.01	0.02
Toluene	0.01	0.01
Zinc	0.05	0.22

93. Natural gas and woodwaste shall be the only fuels used in the Hog Fuel Boiler. The Hog

Fuel Boiler is only capable of firing natural gas and woodwaste. The permittee shall maintain records which demonstrate that natural gas and woodwaste are the only fuels fired at the Hog Fuel boiler. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

94. The permittee shall not burn in excess of 10,044 tons of woodwaste per month or 109,500 tons of woodwaste per twelve consecutive months in the Hog Fuel Boiler. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

95. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #94. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month's individual data shall by submitted in accordance with General Provision #7. [§19.705, 40 CFR Part 52 Subpart E, §18.1004, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

96. The permittee shall test the Hog Fuel Boiler for PM/PM_{10} during the first year of each 5-year permit cycle. Testing shall be performed in accordance with Plantwide Condition #3. The permittee will perform the PM test using EPA Reference Methods 5 and 202. The permittee will perform the PM_{10} test using either EPA Reference Methods 201A and 202 or 5 and 202. By using Method 5 and 202 for PM_{10}, the facility will assume all collected particulate is PM_{10}. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity can not be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. Testing shall be used to demonstrate compliance with permitted emission rates. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

97. The permittee shall test the Hog Fuel Boiler for CO during the first year of each 5-year permit cycle. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 10. Testing shall be used to demonstrate compliance with permitted emission rates. [§19.702 and 40 CFR Part 52 Subpart E]

98. The permittee shall test the Hog Fuel Boiler for NO_X during the first year of each 5-year permit cycle. Testing shall be performed in accordance with Plantwide Condition #3 and EPA Reference Method 7E. Testing shall be used to demonstrate compliance with permitted emission rates. [§19.702 and 40 CFR Part 52 Subpart E]

99. The permittee shall monitor the liquid flow rate to the Hog Fuel Boiler (SN-05) scrubber and shall monitor the scrubber fan amperage. The flow rate shall be maintained at a minimum of 150 gpm. When the Hog Fuel Boiler is operating the scrubber liquid flow rate and scrubber fan amperage will be continuously monitored. The permittee shall adjust the minimum flow rate upon completion of the particulate stack test which is required during the first year of each 5-year permit cycle. [§19.303, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

100. The permittee shall maintain records which demonstrate compliance with Specific Condition #99. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [§19.705, 40 CFR Part 64, and 40 CFR Part 52 Subpart E]

SN-06
Power Boiler

Source Description

The Power Boiler is a 80 million Btu per hour boiler which fires solely natural gas. The boiler was installed at Delta prior to 1976 and therefore is not subject to regulation under NSPS Subpart Dc.

Specific Conditions

101. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #103. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.6	2.6
SO_2	0.1	0.5
VOC	0.5	2.2
CO	6.4	28.1
NO_x	7.7	33.8

102. The permittee shall not cause to be discharged to the atmosphere from the Power Boiler gases which exhibit an opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Condition #103. [§18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

103. Natural gas shall be the only fuel used in the Power Boiler. [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

104. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #103. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.6	2.6

SN-50 thru 54
Non-Point Source Emissions

Specific Conditions

105. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #11. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	ton/yr
50	Chip and Hogged Fuel Storage Piles	PM_{10}	--	0.1
		VOC	--	4.8
51	Saveall Tank	VOC	5.5*	19.5*
		TRS	0.1	0.1
52	Outside White Water Chest	VOC	5.5*	19.5*
		TRS	0.1	0.1
53	Landfill	CO	--	0.1
		VOC	--	8.6
		TRS	--	0.1
54	DAF Unit	VOC	5.5*	19.5*
		TRS	0.1	0.1

*Includes total methanol (5.15 lb/hr and 18.25 ton/yr) for all paper machine sources (SN-15, 16, 17, 18, 19, 40, 51, 52, 54).

106. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #11. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	ton/yr
50	Chip and Hogged Fuel Storage Piles	PM	--	0.1

Source No.	Description	Pollutant	lb/hr	ton/yr
51	Saveall Tank	Acetone	0.13	0.44
		Acrolein	0.02	0.07
		Methanol	5.15*	18.25*
		Acetaldehyde	0.15	0.53
		Benzene	0.01	0.01
		MEK	0.03	0.09
		Styrene	0.01	0.01
52	Outside White Water Chest	Acetone	0.13	0.44
		Acrolein	0.02	0.07
		Methanol	5.15*	18.25*
		Acetaldehyde	0.15	0.53
		Benzene	0.01	0.01
		MEK	0.03	0.09
		Styrene	0.01	0.01
53	Landfill	Acetone	--	0.02
		Acrylonitrile	--	0.01
		Benzene	--	0.01
		Carbon Disulfide	--	0.01
		Chloromethane	--	0.01
		MEK	--	0.02
		Toluene	--	0.09
		Mercury	--	0.001

Source No.	Description	Pollutant	lb/hr	ton/yr
54	DAF Unit	Acetone	0.13	0.44
		Acrolein	0.02	0.07
		Acetaldehyde	0.15	0.53
		Benzene	0.01	0.01
		MEK	0.03	0.09
		Styrene	0.01	0.01
		Methanol	5.15*	18.25*

* Includes total methanol (5.15 lb/hr and 18.25 ton/yr) for all paper machine sources (SN-15, 16, 17, 18, 19, 40, 51, 52, 54).

SN-100 thru 110
Mid-America Packaging

Source Description

The natural gas fired boiler (SN-100) used at MAP is a 1.0 million Btu per hour boiler.

Presses No. 1 and No. 2 are not vented directly to the atmosphere. Emissions from these presses are considered fugitive emissions within the building.

The heat input capacities of the No. 3 Press Tunnel Dryer (SN-102) and the Lacquer Dryer (SN-103) are 1.2 MMBtu per hour each. Both the No. 3 Press Dryer and Lacquer Dryer are natural gas fired.

The heat input capacity of the No. 4 Press Between Decks Dryer Vent (SN-104) is 0.4 MMBtu per hour. The heat input capacity of the No. 4 Press Tunnel Dryer Vent (SN-105) and the Lacquer Dryer Vent (SN-107) is 1.2 MMBtu per hour each. The No. 4 Press Between Decks Dryer, the Tunnel Dryer Vent and the Lacquer Dryer Vent are all natural gas fired.

The heat input capacity of the No. 5 Press Between Decks Dryer (SN-109) is 0.8 MMBtu/hr. The heat input capacity of the No. 5 Press Tunnel Dryer (SN-110) is 1.0 MMBtu/hr. Both the Between Decks Dryer and the Tunnel Dryer are natural gas fired.

Mid-America will comply with the Incidental Printing Exemption of NESHAP Subpart KK – National Emission Standards for the Printing and Publishing Industry.

Individual HAP emissions are not specifically permitted. The MAP facility's HAP emissions are limited by a TLV table.

Specific Conditions

107. The permittee shall not exceed the emission rates set forth in the following table and associated footnotes.

 The hourly and annual emission rates from natural gas combustion have been based on maximum capacity. The hourly emission rates from adhesive, ink & ink additives, and lacquer usage have been based on maximum capacity. Compliance with the annual emission rates from adhesive, ink & ink additives, and lacquer usage will be demonstrated by compliance with Specific Condition #109. Compliance with the emission rates for SN-101 will be demonstrated by compliance with Specific Condition #115. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	lb/hr	ton/yr
100	Natural Gas Fired Boiler	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 0.1 0.1 0.1	0.1 0.1 0.1 0.4 0.5
101	Mixer Hood Exhaust	PM_{10}	2.8	6.3
102 thru 110	No. 3 Press (Tunnel Dryer Vent and Lacquer Dryer Vent) No. 4 Press (Between Decks Dryer Vent, Tunnel Blower Vent, Auxiliary Blower Vent, and Lacquer Dryer Vent) No. 5 Press (Between Decks Dryer Vent and Tunnel Dryer Vent) General Building Ventilation	PM_{10} SO_2 VOC CO NO_x	0.7 0.7 84.5 0.7 1.1	0.7 0.7 60.0[1] 1.3 4.6

[1] Emissions from natural gas combustion account for 0.5 ton/yr of this total.

108. The permittee shall not exceed the emission rates set forth in the following table and its associated footnotes.

The hourly and annual emission rates from natural gas combustion have been based on maximum capacity. The hourly emission rates from adhesive, ink & ink additives, and lacquer usage have been based on maximum capacity. Compliance with the annual emission rates from adhesive, ink & ink additives, and lacquer usage will be demonstrated by compliance with Specific Condition #109. Compliance with the emission rates for SN-101 will be demonstrated by compliance with Specific Condition #115. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source No.	Description	Pollutant	lb/hr	ton/yr
100	Natural Gas Fired Boiler	PM	0.1	0.1
101	Mixer Hood Exhaust	PM	2.8	6.3
102 thru 110	No. 3 Press (Tunnel Dryer Vent and Lacquer Dryer Vent) No. 4 Press (Between Decks Dryer Vent, Tunnel Blower Vent, Auxiliary Blower Vent, and Lacquer Dryer Vent) No. 5 Press (Between Decks Dryer Vent and Tunnel Dryer Vent) General Building Ventilation	PM HAP[1,2,3] Ammonia	0.7 84.5 4.4	0.7 24.5 19.3

[1] The limit for any combination of HAPs applied to product on the flexographic printing presses is 5.29 tons per twelve consecutive months.

[2] The limit for the total combination of HAPs is 24.5 tons per twelve consecutive months, which includes the 5.29 tons per twelve consecutive months total HAPs applied to product on the flexographic presses.

[3] Because the raw materials at SN-102 through SN-108 contain only organic HAPs, the hourly emission rate has been set to equal the hourly VOC emission rate for these sources.

Annual VOC and HAP Emission Rates

109. For SN-102 thru SN-108, the permittee shall calculate total VOC and HAP emissions each month based on that month's usage of adhesives, ink & ink additives, lacquers, and cleaners. Monthly emissions will be compared to the annual limit on a twelve month rolling basis. The VOC and HAP emission records, including exempted HAP usage and emissions, shall be reported in accordance with General Provision 7. [§19.705, 40 CFR Part 52 Subpart E, §18.1004, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

110. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #109. The records shall be updated on a monthly basis. These

records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month total and each month's individual data shall by submitted in accordance with General Provision 7. [Regulation 19 §19.705, Regulation 18 §18.1004, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Opacity Limits

111. The permittee shall not cause to be discharged to the atmosphere from the Natural Gas Fired Boiler (SN-100), the No. 3 Press Tunnel Dryer Vent (SN-102), the No. 3 Lacquer Dryer Vent (SN-103), the No. 4 Press Between Decks Dryer Vent (SN-104), the No. 4 Press Tunnel Dryer Vent (SN-105), the No. 4 Press Lacquer Dryer Vent (SN-107) or No. 5 Press (Between Decks Dryer Vent and Tunnel Dryer Vent) gases which exhibit an opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limits shall be demonstrated by compliance with Specific Condition #114. [§18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

112. The permittee shall not cause to be discharged to the atmosphere from the Mixer Hood Exhaust (SN-101) gases which exhibit an opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with the opacity limit shall be demonstrated by compliance with Specific Condition #113. [§19.503 and 40 CFR Part 52 Subpart E]

113. Weekly observations of the opacity from the Mixer Hood Exhaust shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this Specific Condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request. [§19.705 and 40 CFR Part 52 Subpart E]

    a. The date and time of the observation.
    b. If visible emissions which appeared to be above the permitted limit were detected.
    c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action

taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.

d. The name of the person conducting the opacity observations.

Natural Gas Usage

114. Natural gas shall be the only fuel used for the Natural Gas Fired Boiler (SN-100), No. 3 Press Tunnel Dryer (SN-102), the No. 3 Press Lacquer Dryer (SN-103), the No. 4 Press Between Decks Dryer Vent (SN-104), the No. 4 Press Tunnel Dryer Vent (SN-105) and the No. 4 Press Lacquer Dryer Vent (SN-107). [§19.705, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

Starch Usage

115. The permittee shall not use in excess of 260,480 pounds of starch per month or 3,124,800 pounds of starch per twelve consecutive months. [§19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

116. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #115. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month total and each month's individual data shall by submitted in accordance with General Provision #7. [§19.705 and 40 CFR Part 52 Subpart E]

NESHAP Subpart KK

117. Mid-America Packaging is subject to and shall comply with applicable provisions of 40 CFR Part 63 Subpart A – General Provisions and 40 CFR Part 63 Subpart KK – National Emission Standards for the Printing and Publishing Industry. A copy of Subpart KK is provided in Appendix D. Applicable provisions include, but are not limited to, the following: [§19.304 and 40 CFR Part 63, Subpart KK]

a. The permittee shall apply no more than 881 lb per month, for every month, of organic HAP on product and packaging rotogravure or wide-web flexographic printing presses. [40 CFR §63.821(b)(2)]

b. The permittee shall maintain records of the total volume and organic HAP content of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month. [40 CFR §63.829(e)(2)]

c. The permittee shall submit the reports specified to the Administrator: an initial notification required in 40 CFR §63.9(b). [40 CFR §63.830(b)(1)]

118. The permittee shall not exceed the facility-wide Hazardous Air Pollutant (HAP) content limits set forth in the following tables. Materials which are not compliant with the requirements of this table may be exempted from this condition provided they meet all the requirements of Specific Condition #120. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Minimum HAP TLV (mg/m^3)	Maximum Allowable Content (wt %)
99.11	100%
89.20	90%
79.29	80%
69.38	70%
59.47	60%
49.56	50%
39.64	40%
29.73	30%

Minimum HAP TLV (mg/m^3)	Maximum Allowable Content (wt %)
19.82	20%
9.91	10%
4.96	5%
3.96	4%
2.97	3%
1.98	2%
0.99	1%
*	>1%

*Several materials used contain trace amounts (<1%) of HAPs with low TLVs such as acrylamide. Such HAPs in trace amounts are not covered under the limits of this table.

119. The permittee shall maintain records which demonstrate compliance with the limits set in Specific Conditions #117 and #118, and which may be used by the Department for enforcement purposes. Compliance shall be determined by inspecting the ACGIH Threshold Limit Values (TLVs) as listed on current MSDS, or in the most recently published ACGIH handbook of TLVs and Biological Exposure Indices (BEIs) and properly noting on the monthly HAP records whether the material in question is compliant with the table contained in Specific Condition #118. These records shall be maintained on site and shall be provided to the Department upon request. [§18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

120. Certain HAP containing materials that are unable to meet the requirements of Specific Condition #118 may be exempted provided that all of the following conditions are met. Any exemptions that are claimed must be noted in the HAP records. [§18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

a. Emissions of exempted pollutants shall not exceed 200 lb of any single HAP during any one month.

b. This exemption may only be claimed if the source material of the HAP is used for small quantity application. This exemption may not be claimed for any HAP emissions resulting from usages of bulk process materials (such as inks) that are used in large quantities on a regular basis. The Department shall reserve the right to determine whether a material qualifies under this condition.

c. Total emissions of any single HAPs that are claimed as an exemption may not exceed 1 tpy and the combined HAP emissions that are claimed as an exemption may not exceed 2.5 tpy.

HVLC/LVHC Closed-Vent System

Source Description

40 CFR Part 63, Subpart S requires that Pulp and Paper Mills install a system in which to control Low Volume High Concentration (LVHC) and High Volume Low Concentration (HVLC) gases. Vapors from the following sources are routed through the closed-vent system and sent to the Lime Kiln for incineration:

LVHC Gases	Multiple Effect Evaporator Hotwell
	Turpentine Condensers
	Turpentine Decanter
	Blow Heat Secondary Condenser
	Foul Condensate Collection Tank
HVLC Gases	Brownstock Washers
	Foam Tank
	Black Liquor Filter
	Rejects Surge Tank
	Hot Stock Surge Tank

Delta is currently collecting several sources of LVHC gases. These gases are fed to the Lime Kiln (SN-01) for treatment. Emissions from the Evaporator Hotwell, Turpentine Decanter, Turpentine Condenser, and Blow Tank Secondary Condenser are currently collected and treated. The Foul Condensate Tank is collected and treated as well. Delta collects the gases, sends them to a packed tower scrubber to recover sulfur for the process, and then destroys the gases in the Lime Kiln (SN-01).

The First through Fourth Stage Washer Hoods are collectively called the Brown Stock Washer System. To comply with the MACT requirements, the HVLC gases will be collected and sent through the NCG HVLC Condenser and NCG HVLC Heater to reduce moisture content, and then to the Lime Kiln for destruction.

Specific Conditions

121. The NCG pre-scrubber shall be operated at all times when LVHC gases are being collected and treated in the Lime Kiln (SN-01) except that the permittee may bypass this scrubber for 200 hours/year for maintenance activities. [40 CFR 70.6 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

122. The enclosures and closed-vent system shall meet the requirements specified in §63.450-Standards For Enclosures and Closed-Vent Systems; §63.453(k)-Monitoring Requirements; and §63.454(b)-Recordkeeping Requirements. [§19.304 of Regulation 19, and 40 CFR Part 63, Subpart S, §63.443(c)]

    a. 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. [40 CFR §63.450(b)]

    b. Each component of the closed-vent system 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). [40 CFR §63.450(c)]

    c. Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations shall comply with either of the following requirements: [40 CFR §63.450(d)]

        i. On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications, a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line. In loop seals, temperature measurement is an acceptable method of demonstrating gas flow.

        ii. 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 the valve or closure mechanism cannot be opened without breaking the seal.

iii. The closed-vent system shall comply with the following requirements: [40 CFR §63.453(k)]

A. For each enclosure opening, a visual inspection of the closure mechanism shall be performed at least once every 30 days to ensure the opening is maintained in the same closed and sealed position as during the performance test except when necessary to use the opening for sampling, inspection, maintenance, or repairs. [40 CFR §63.453(k)(1)]

B. Each closed-vent system 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. [40 CFR §63.453(k)(2)]

C. For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks measured initially and annually by complying with the following procedures found in §63.457(d): [40 CFR §63.453(k)(3)]

122.c.iii.C.1. Method 21, of Part 60, appendix A;
122.c.iii.C.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;
  122.c.iii.C.2.1. Zero air (less than 10 parts per million by volume of hydrocarbon in air) and;
  122.c.iii.C.2.2. 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.

D. Demonstrate initially and annually that each enclosure opening is maintained at negative pressure by using one of the following procedures found in §63.457(e): [40 CFR §63.453(k)(4)]

122.c.iii.D.1. An anemometer to demonstrate flow into the enclosure opening;
122.c.iii.D.2. Measure the static pressure across the opening;
122.c.iii.D.3. Smoke tubes to demonstrate flow into the enclosure opening;

122.c.iii.D.4. Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.

E. The valve or closure mechanism on each bypass line that is not computer controlled shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line. [40 CFR §63.453(k)(5)]

F. If an inspection identifies visible defects in ductwork, piping, enclosures or connections to covers, 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: [40 CFR §63.453(k)(6)]

122.c.iii.F.1. 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.

122.c.iii.F.2. The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delays in corrective repairs beyond 15 calendar days are allowed in cases where the corrective actions or repairs are technically infeasible without a process unit shutdown or where the emissions resulting from immediate repair would be greater than the emissions likely to result from the delay of the repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

d. 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: [40 CFR §63.454(b)]

i. Date of inspection;
ii. The equipment type and identification;
iii. Results of negative pressure tests for enclosures;
iv. Results of leak detection tests
v. The nature of the defect or leak and the method of detection (i.e. visual inspection or instrument detection);
vi. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
vii. Repair methods applied in each attempt to repair the defect or leak;
viii. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

ix. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
x. The date of successful repair or the defect or leak;
xi. The position and duration of the opening of bypass line valves and the condition of any valve seals; and
xii. The duration of the use of bypass valves on computer controlled valves.

123. An excess emission and continuous monitoring system performance report shall be submitted to the EPA and to the Department semi-annually. [Regulation 19, §19.304 and 40 CFR §63.10(e)(3)(i)]

Condensate Collection System

Source Description

The Condensate Collection System collects the condensates and recycles them while the gases are sent through a closed system for control. Because the non-condensable gases are sent to closed-vent system (and thus, sent to the Lime Kiln) for control, there are no emissions from this source.

124. The pulping process condensates from some but not necessarily all of the following equipment systems shall be treated to meet the requirements set forth in Specific Conditions #125 through #132. [Regulation 19, §19.304 and 40 CFR §63.446(b)]
    a. Multiple Effect Evaporator Hotwell;
    b. Turpentine Underflow Standpipe;
    c. Blow Heat Accumulator Overflow;
    d. NCG HVLC Condenser Seal Tank.

125. Pulping process condensates from equipment systems listed in Specific Condition #124 shall be collected where the total HAP mass is at least 7.2 pounds of total HAP per ton of oven dried pulp. [Regulation 19, §19.304 and 40 CFR §63.446(c)(3)]

126. The collected pulping process condensates shall be conveyed in a closed collection system that is designed and operated to meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962 of Subpart RR of this part except closed vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443(d) and 63.450, instead of in accordance with 40 CFR 63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii). The closed collection system will meet the specified requirements by being a hard-piped individual drain system per 40 CFR 63.962 (a)(2). The Foul Condensate Collection Tank will be equipped with a water seal per 40 CFR 63.962(b)(2)(i)(A). [Regulation 19, §19.304 and 40 CFR §63.446(d)(1)]

127. The condensate tank located within the closed collection system must meet the following requirements: [Regulation 19, §19.304 and 40 CFR §63.446(d)(2)]

    a. The fixed roof and all openings (e.g. access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated with an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements of Specific Condition #122 for the HVLC system and routed to a control device that meets the conditions of Specific Condition #69 for the Lime Kiln as a control device.

    b. 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.

128. The closed condensate system shall meet the requirements specified in §63.453(a) and (i) CMS Requirements; §63.453(l)-Monitoring Requirements; and §63.454(b)-Recordkeeping Requirements. [Regulation 19, §19.304 and 40 CFR §63.453(1)]

a. The permittee shall install, calibrate, certify, operate, and maintain (according to manufacturer's specifications) a continuous monitoring system (CMS) to measure the appropriate parameters that shall be submitted to the Department prior to the initial performance test. [40 CFR §63.453(a) and (i)]

b. The permittee shall conduct a visual inspection of each condensate closed collection system at least every 30 days. The visual inspections shall verify that the appropriate liquid level in the water seal on the Foul Condensate Collection Tank are being maintained and identify any other defects that could reduce water seal control effectiveness. In addition, the permittee shall visually inspect the unburied portion of the collection system piping to verify that no defects are present. [40 CFR §63.453(l)(1)]

c. The Foul Condensate Collection Tank shall be operated with no detectable leaks as specified in §63.446(d)(2)(i) measured initially and annually by the following procedures specified in §63.457(d): [40 CFR §63.453(l)(2)]

i. Method 21, of 40 CFR Part 60, Appendix A;

ii. 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;

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

B. 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.

d. If an inspection required by §63.453(l)(1) identifies visible defects in the closed collection system, or if an instrument reading of 500 parts per million or greater above background is measured, the first efforts at repair of the defect will be no later than 5 calendar days after detection. Repair will be completed as soon as possible but no later than 15 calendar days after detection unless the repair of the defect requires emptying or temporary removal from service of the collection system. The defect will be repaired the next time the process generating the wastewater stops operation. The repair of the defect will be completed before the process resumes operation. [40 CFR §63.453(l)(3)]

e. 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: [40 CFR §63.454(b)]

i. Date of inspection;
ii. The equipment type and identification;
iii. Results of negative pressure tests for enclosures;
iv. Results of leak detection tests
v. The nature of the defect or leak and the method of detection, i.e. visual inspection or instrument detection;
vi. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
vii. Repair methods applied in each attempt to repair the defect or leak;
viii. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
ix. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
x. The date of successful repair or the defect or leak;
xi. The position and duration of the opening of bypass line valves and the condition of any valve seals; and
xii. The duration of the use of bypass valves on computer controlled valves.

129. A CMS shall be installed and operated in accordance with a compliance schedule for the condensate collection system. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart S]

130. To establish or reestablish the value for each operating parameter required to be monitored under 63.453(l), the permittee shall use the following procedures: [40 CFR Part 63.453(n)]

a. The operating parameter shall be continuously recorded during the initial performance test or any subsequent performance tests.
b. Determination 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 recommendation.

131. The permittee shall use the equations contained within 63.457(j)(1) and (2) to demonstrate compliance with the mass flow rate and mass per megagram ODP requirements for liquid streams specified in 63.446. [40 CFR 63.457(j)]

132. Operation of the condensate collection system below minimum operation parameter values or above maximum operating parameter values established under Subpart S or failure to perform procedures required shall constitute a violation of the applicable

emission standard of this subpart and be reported as a period of excess emissions. Instances where emissions are in excess of the appropriate standard, but are caused by events identified in the mill's Startup, Shutdown, and Malfunction plan (required by 40 CFR part 63.6) will not be considered in the calculation of periods of excess emissions. [Regulation 19, §19.304 and 40 CFR §63.453(o)]

Subpart MM Conditions

Source Description

These conditions pertain to the requirements of NESHAP Subpart MM. The following specific conditions outline the procedures for determining an overall PM emission limit as well as the testing, maintenance, operation, monitoring, record keeping, and reporting requirements for affected sources. The requirements of this subpart are applicable to the Lime Kiln (SN-01), the Recovery Furnace (SN-02) and the Smelt Dissolving Tank (SN-04). Emissions limits for these sources are included in the specific conditions for each source. The emission limits for these sources may be updated following the performance test performed in accordance with the requirements of Subpart MM.

The compliance date for Subpart MM was March 13, 2004. Delta chose to comply with the overall PM emission limit provision outlined in Subpart MM.

Specific Conditions

133. The permittee must establish PM emissions limits for each existing kraft or soda recovery furnace (SN-02), smelt dissolving tank (SN-04), and lime kiln (SN-01) that operates 6,300 hours per year or more by [40 CFR §63.862(a)(1)(ii)]:

    a. Establishing an overall PM emission limit for each existing process unit in the chemical recovery system at the kraft or soda pulp mill using the methods in 40 CFR Part 63 §63.865(a)(1) and (2).
    b. The emissions limits for each kraft recovery furnace, smelt dissolving tank, and lime kiln that are used to establish the overall PM limit must not be less stringent than the emissions limitations required by §60.282 of 40 CFR Part 60 for any kraft recovery furnace, smelt dissolving tank, or lime kiln that is subject to the requirements of §60.282.
    c. Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must ensure that the PM emissions discharged to the atmosphere from each of these sources are less than or equal to the applicable PM emissions limits, established using the methods in 40 CFR §63.865(a)(1), that are used to establish the overall PM emissions limits.
    d. Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must reestablish the emissions limits determined in section (a) of this condition if either of the following actions are taken:
        i. The air pollution control system for any existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established in section a of this condition is modified (as defined in 40 CFR §63.861) or replaced; or
        ii. Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established is shut down for more than 60 consecutive days.

134. As an alternative to operating a flow meter which monitors the upper and lower bound limit of the scrubber liquid flow rate to the TRS scrubber on the recovery boiler (SN-02), the permittee will monitor the minimum liquid flow rate only (Specific Condition #27). [Regulation 19 §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

135. As an alternative to installing a pressure drop indicator which monitors the upper and lower bound limits of the pressure differential across the TRS scrubber on the recovery boiler (SN-02), the permittee will monitor the airflow across the scrubber, thus indicating operation of the scrubber fan (Specific Condition #28). [Regulation 19 §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

136. As an alternative to installing a continuous opacity monitoring system (COMS) to monitor emissions from the recovery boiler (SN-02) equipped with an ESP, the permittee has been granted approval by EPA to monitor the secondary power at each of the four ESP fields. The total secondary power across the four fields shall be maintained at a minimum of 43.1 kW as determined during the initial performance test. Compliance with this condition shall be demonstrated through Specific Condition #29. [Regulation 19, §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

137. As an alternative to installing a pressure drop indicator which monitors the upper and lower bound limits of the pressure differential across the Smelt Dissolving Tank scrubber (SN-04), the permittee will monitor the minimum pressure differential (Specific Condition #45). [Regulation 19 §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

138. As an alternative to operating a flow meter which monitors the upper and lower bound limit of the scrubber liquid flow rate to the Smelt Dissolving Tank scrubber (SN-04), the permittee will monitor the minimum liquid flow rate only (Specific Condition #46). [Regulation 19 §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

139. As an alternative to installing a pressure drop indicator which monitors the upper and lower bound limits of the pressure differential across the Lime Kiln AP Tech scrubber (SN-01), the permittee will monitor the minimum pressure differential (Specific Condition #62). [Regulation 19 §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

140. As an alternative to operating a flow meter which monitors the upper and lower bound limit of the scrubber liquid flow rate to the Lime Kiln AP Tech scrubber (SN-01), the permittee will monitor the minimum liquid flow rate only (Specific Condition #63). [Regulation 19 §19.303, 40 CFR §63.8(f)(2)(i), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

141. The permittee must install, calibrate, maintain, and operate a continuous parameter monitoring system (CPMS) compliant with 40 CFR §63.864(e), that can be used to determine and record the pressure drop across the affected scrubbers and the scrubbing liquid flow rate using the procedures in §63.8(c), as well as the following procedures [40 CFR §63.864 (e)(10)(i) and (ii)]:

    a. The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber(s) must be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (±2 inches of water gage pressure); and
    b. The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.

142. The permittee must determine the operating range for the monitoring parameters of the wet scrubber using the following methods [40 CFR §63.864 (j)]:
    a. The permittee must conduct an initial performance test required in §63.865 for the wet scrubber; or
    b. The permittee may base operating ranges on values recorded during previous performance tests or conduct additional performance tests for the specific purpose of establishing operating ranges, provided that test data used to establish the operating ranges are or have been obtained using the test methods required in 40 CFR Part 63 Subpart MM. The permittee must certify that all control techniques and processes have not been modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained.
    c. The permittee may establish expanded or replacement operating ranges for the monitoring parameter values listed in Specific Conditions 27, 28, 29, 45, 46, 62, and 63 [§63.864 (e)(10)] and established in Specific Condition 142141 a or b [§63.864 (j)(1) or (2)] during subsequent performance tests using the test methods in 40 CFR §63.865.
    d. The permittee must continuously monitor each parameter and determine the arithmetic average value of each parameter during each performance test. Multiple performance tests may be conducted to establish a range of parameter values.
    e. During the period of each performance test for the wet scrubber, the permittee must record the pressure drop across the scrubber and the scrubbing liquid flow rate over the same time period as the performance test while the vent stream is routed and constituted normally. The permittee must locate the pressure and flow monitoring devices in positions that provide representative measurements of these parameters.
    f. During the period, if any, between the compliance date specified for the affected source in 40 CFR §63.863 and the date upon which monitoring systems have been installed and validated and any applicable operating ranges for monitoring parameters have been set, the owner or operator of the affected source or process

unit must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

143. The permittee is required to implement corrective action, as specified in the startup, shutdown, and malfunction plan prepared under 40 CFR §63.866(a), if the following monitoring exceedances occur [40 CFR §63.864 (k)(1)].
    a. For a new or existing kraft or soda recovery furnace or lime kiln equipped with an ESP, when the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity; and
    b. For a existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, an exceedence occurs when any 3-hour average parameter value is outside the range of values established in §63.864(j) and Specific Conditions 27, 28, 29, 45, 46, 62, and 63.

144. The permittee is in violation of the standards of §63.862 if the following monitoring exceedances occur [40 CFR §63.864 (k)(2)].
    a. For an existing kraft or soda recovery furnace equipped with an ESP, when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;
    b. For a new kraft or soda recovery furnace or a new or existing lime kiln equipped with an ESP, when opacity is greater than 20 percent for 6 percent or more of the operating time within any quarterly period; and
    c. For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, an exceedence occurs when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in paragraph §63.864(j) and Specific Conditions 27, 28, 29, 45, 46, 62, and 63.

145. The permittee shall conduct an initial performance test using the test methods and procedures listed in §63.7 and §63.865(b) [40 CFR §63.865].

146. The owner or operator of a process unit seeking to comply with a PM emission limit under §63.862(a)(1)(ii)(A) and Specific Condition 133 must use the following procedures [40 CFR §63.865(a)]:

    a. Determine the overall PM emission limit for the chemical recovery system at the mill using Equation 1 of §63.862(a)(1) [See attachment].
    b. Establish an emission limit for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln; and, using these emissions limits, determine the overall PM emission rate for the chemical recovery system at the mill using the procedures in paragraphs (a)(2)(i) through (v) of §63.865, such that the overall PM emission rate calculated in paragraph (a)(2)(v) of §63.865 is less than or equal

to the overall PM emission limit determined in paragraph (a)(1) of §63.865, as appropriate.

i. The PM emission rate from each affected recovery furnace must be determined using Equation 2 of §63.865 (a)(2)(i).
ii. The PM emission rate from each affected smelt dissolving tank must be determined using Equation 3 of §63.865 (a)(2)(ii).
iii. The PM emission rate from each affected lime kiln must be determined using Equation 4 of §63.865 (a)(2)(iii).
iv. If more than one similar process unit is operated in the chemical recovery system at the kraft or soda pulp mill, Equation 5 of §63.865 (a)(2)(iv) must be used to calculate the overall PM emission rate from all similar process units in the chemical recovery system at the mill and must be used in determining the overall PM emission rate for the chemical recovery system at the mill.
v. The overall PM emission rate for the chemical recovery system at the mill must be determined using Equation 6 of §63.865 (a)(2)(v).
vi. After the Administrator has approved the PM emissions limits for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, the owner or operator complying with an overall PM emission limit established in §63.862(a)(1)(ii) must demonstrate compliance with the HAP metals standard by demonstrating compliance with the approved PM emissions limits for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, using the test methods and procedures in §63.865(b).

147. The permittee must use the following procedures to show compliance with §63.862 (a) [40 CFR §63.865(b)].

a. For purposes of determining the concentration or mass of PM emitted from each kraft or soda recovery furnace, sulfite combustion unit, smelt dissolving tank, or lime kiln, Method 5 or 29 in appendix A of 40 CFR part 60 must be used, except that Method 17 in appendix A of 40 CFR part 60 may be used in lieu of Method 5 or Method 29 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 205°C (400°F). For Methods 5, 29, and 17, the sampling time and sample volume for each run must be at least 60 minutes and 0.90 dscm (31.8 dscf), and water must be used as the cleanup solvent instead of acetone in the sample recovery procedure.
b. For sources complying with 40 CFR §63.862(a) or (b), the PM concentration must be corrected to the appropriate oxygen concentration using Equation 7 of §63.865(b)(2).
c. Method 3A or 3B in appendix A of 40 CFR Part 60 must be used to determine the oxygen concentration. The voluntary consensus standard ANSI/ASME PTC 19.10-1981--Part 10 (incorporated by reference—see §63.14) may be used as an alternative to using Method 3B. The gas sample must be taken at the same time and at the same traverse points as the particulate sample.
d. For purposes of complying with §63.862(a)(1)(ii)(A), the volumetric gas flow rate must be corrected to the appropriate oxygen concentration using Equation 8 of §63.865 (b) (4).

e.
   i. For purposes of selecting sampling port location and number of traverse points, Method 1 or 1A in appendix A of 40 CFR part 60 must be used;
   ii. For purposes of determining stack gas velocity and volumetric flow rate, Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A of 40 CFR part 60 must be used;
   iii. For purposes of conducting gas analysis, Method 3, 3A, or 3B in appendix A of 40 CFR part 60 must be used. The voluntary consensus standard ANSI/ASME PTC 19.10-1981--Part 10 (incorporated by reference--see §63.14) may be used as an alternative to using Method 3B; and
   iv. For purposes of determining moisture content of stack gas, Method 4 in appendix A of 40 CFR part 60 must be used.

f. Process data measured during the performance test must be used to determine the black liquor solids firing rate on a dry basis and the CaO production rate.

148. The permittee must develop and implement a written plan as described in §63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and control systems used to comply with the standards. In addition to the information required in §63.6(e), the plan must include the following requirements [40 CFR §63.866 (a)].

a. Procedures for responding to any process parameter level that is inconsistent with the level(s) established under §63.864(j)(2) and Interim Condition 6 b, including the procedures in paragraphs (a)(1)(i) and (ii) of §63.866, as follows:
b. Procedures to determine and record the cause of an operating parameter exceedance and the time the exceedance began and ended; and
c. Corrective actions to be taken in the event of an operating parameter exceedance, including procedures for recording the actions taken to correct the exceedance.
d. The startup, shutdown, and malfunction plan also must include the schedules listed in paragraphs (a)(2)(i) and (ii) of §63.866, as follows:
   i. A maintenance schedule for each control technique that is consistent with, but not limited to, the manufacturer's instructions and recommendations for routine and long-term maintenance; and
   ii. An inspection schedule for each continuous monitoring system required under §63.864 to ensure, at least once in each 24-hour period, that each continuous monitoring system is properly functioning.

149. The permittee must maintain records of any occurrence when corrective action is required under §63.864(k)(1) and Specific Condition 143, and when a violation is noted under §63.864(k)(2) and Interim Condition 9 [40 CFR §63.866 (b)].

150. In addition to the general records required by §63.10(b)(2), the permittee must maintain records of the following information [40 CFR §63.866 (c)].

a. Records of black liquor solids firing rates in units of Mg/d or ton/d for all recovery furnaces and semichemical combustion units;
b. Records of CaO production rates in units of Mg/d or ton/d for all lime kilns;
c. Records of parameter monitoring data required under §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;
d. Records and documentation of supporting calculations for compliance determinations made under §63.865(a) through (e); and
e. Records of monitoring parameter ranges established for each affected source or process unit.

151. The permittee must submit the applicable notifications from 40 CFR Part 63 Subpart A, as specified in Table 1 of 40 CFR Part 63 Subpart MM [40 CFR §63.867 (a)(1)].

152. The permittee must comply with the additional reporting requirements for HAP metals standards listed, as follows [40 CFR §63.867(b)]:

a. Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) and Interim Condition 1 must submit the PM emissions limits determined in §63.865(a) for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln to the Administrator for approval. The emissions limits must be submitted as part of the notification of compliance status required under Subpart A of 40 CFR Part 63.
b. Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) and Interim Condition 1 must submit the calculations and supporting documentation used in §63.865(a)(1) and (2) to the Administrator as part of the notification of compliance status required under Subpart A of 40 CFR Part 63.
c. After the Administrator has approved the emissions limits for any process unit, the owner or operator of a process unit must notify the Administrator before any of the following actions are taken [40 CFR §63.867 (b)(3)]:
    i. The air pollution control system for any process unit is modified or replaced;
    ii. Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln in a chemical recovery system at a kraft or soda pulp mill complying with the PM emissions limits in §63.862(a)(1)(ii) is shut down for more than 60 consecutive days;
    iii. A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit is changed; or
    iv. The black liquor solids firing rate for any kraft or soda recovery furnace during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.

d. An owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) and seeking to perform the actions in paragraph c. i. or c. ii. of this condition [§63.867 (b)(3)(i) or (ii)] must recalculate the overall PM emissions limit for the group of process units and resubmit the documentation required in paragraph b of this condition [§63.867(b)(2)] to the Administrator. All modified PM emissions limits are subject to approval by the Administrator.

153. The permittee must report quarterly, if measured parameters meet any of the conditions specified in Specific Conditions 143 and 144 [§63.864 (k)(1) or (2)]. This report must contain the information specified in 40 CFR §63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in Specific Condition 143 [§63.864(k)(1)], and the number and duration of occurrences when the source met or exceeded the conditions in Specific Condition 144 [§63.864(k)(2)]. Reporting excess emissions below the violation thresholds of §63.864(k) does not constitute a violation of the applicable standard [40 CFR §63.867(c)].

a. When no exceedances of parameters have occurred, the owner or operator must submit a semiannual report stating that no excess emissions occurred during the reporting period.

b. The owner or operator of an affected source or process unit subject to the requirements of Subpart MM and Subpart S of 40 CFR Part 63 may combine excess emissions and/or summary reports for the mill.

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Delta Natural Kraft and Mid-America Packaging, LLC will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]

3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

4. The permittee must provide: [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
    a. Sampling ports adequate for applicable test methods;
    b. Safe sampling platforms;
    c. Safe access to sampling platforms; and
    d. Utilities for sampling and testing equipment.

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

7. The permittee must prepare and implement a Startup, Shutdown, and Malfunction Plan (SSM). If the Department requests a review of the SSM, the permittee will make the SSM available for review. The permittee must keep a copy of the SSM at the source's location and retain all previous versions of the SSM plan for five years. [Regulation 19, §19.304 and 40 CFR 63.6(e)(3)]

8. The permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303. [Regulation 18, §18.801]

9. The permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants from becoming airborne. [Regulation 18, §18.901]

10. All monitoring devices used for determining proper operation of control equipment shall: [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
    a. Operate annually a minimum of 95% of the time the control equipment is being used or
    b. Have records that demonstrate the pollution control equipment was operating properly while the monitoring device was not working. The permittee shall maintain written procedures for determining proper operation of the control equipment when not using continuous monitoring device.

11. Regulatory references to 40 CFR Part 63 Subpart A and Subpart S in this permit shall apply as promulgated and on the dates specified in the regulation. [Regulation 19, §19.304]

12. The permittee shall comply with all notification requirements including initial notifications, notification of performance tests, continuous monitoring system performance evaluations, and source compliance status. [40 CFR §63.9]

13. The permittee shall maintain the following records in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63, Subpart S. These records shall be maintained on site and provided to Department personnel upon request. [40 CFR Part §63.10]
    a. Startup, Shutdown, Malfunction, and Maintenance records;
    b. Continuous Monitoring System Records.

14. The permittee shall submit the following reports on a semi-annual basis to the Department in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63, Subpart S. [40 CFR Part §63.10]
    a. Excess Emission Reports;
    b. Monitoring System Performance Reports;
    c. Startup, Shutdown, and Malfunction Reports.

Title VI Provisions

15. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]

a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

16. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]

    a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
    b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
    c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
    d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152.)
    e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
    f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

17. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

18. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

    The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

19. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program".

NESHAP Requirements:

20. The facility is subject to and shall comply with applicable provisions of 40 CFR Part 63 Subpart S - National Standards for Hazardous Air Pollutants from the Pulp and Paper Industry. A copy of Subpart S is provided in Appendix C.

Permit Shield

21. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated January 15, 2003.

Applicable Regulations

Source	**Regulation**	**Description**
Facility	Arkansas Regulation #19	Regulations of the Arkansas State Implementation Plan for Air Pollution Control
Facility	Arkansas Regulation #26	Regulations of the Arkansas Operating Permit Program
MAP	40 CFR Part 63 Subpart A	General Provisions
MAP	40 CFR Part 63 Subpart KK	National Emission Standards for the Printing and Publishing Industry
55	40 CFR Part 60 Subpart A	General Provisions
55	40 CFR Part 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
Delta	40 CFR Part 63 Subpart S	NESHAP for Pulp and Paper
01, 02, & 04	40 CFR Part 63 Subpart MM	NESHAP for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semichemical Pulp Mills

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated January 15, 2003.

Inapplicable Regulations

Description of Regulation	**Regulatory Citation**	**Affected Source**	**Basis for Determination**
National Emission Standards for the Printing and Publishing Industry	40 CFR Part 63 Subpart KK	Pine Bluff Mill	The Pulp and Paper mill creates the emitted HAPs as an impurity in the production process, the mill itself is not subject to the regulation (40 CFR §63.820(a)(2)).
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	01	pre-1976
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	02	pre-1976
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	04	pre-1976
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	08A and 08B	pre-1976
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	13 and 17	pre-1976
Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	40 CFR Part 60 Subpart Db	05	pre-1976
Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	40 CFR Part 60 Subpart Dc	06	pre-1976

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated January 15, 2003.

Group A Insignificant Activities			
Source No.	**Location**	**Description**	**Justification**
MISC-I-02	Delta	Maintenance Welding Hood Vent	A. 7
FS-I-01	Delta	Air Compressor Diesel Tank #1 (550 gallons)	A. 3
FS-I-02	Delta	Air Compressor Diesel Tank #2 (550 gallons)	A. 3
FS-I-03	Delta	Diesel Fire Pump Tank (1,000 gallons)	A. 3
FS-I-04	Delta	Recovery Diesel Tank (1,000 gallons)	A. 3
FS-I-05	Delta	Kerosene Tank #1 (1,000 gallons)	A. 3
FS-I-06	Delta	Kerosene Tank #2 (1,000 gallons)	A. 3
FS-I-07	Delta	Taxable Diesel Tank (140 gallons)	A. 3
FS-I-09	Delta	Kerosene Truck Tank (140 gallons)	A. 3
---	Delta	Portable Kerosene Heaters (152,000 BTU/hr)	A. 5
PM-1-02	Delta	Paper Machine Press Transfer Blowbox (250,000 BTU/hr)	A. 1
FS-I-08	Delta	Woodyard Diesel Tank	A. 13
FS-I-10	Delta	Unleaded Gasoline Tank	A. 13
---	Delta	Leachate Storage Tank	A. 13
I-01	MAP	Natural Gas Fired Boiler (1 MMBTU/hr)	A. 1
	MAP	Tubers & Bottomers	A. 13

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.[40 CFR 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective August 10, 2000]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26, §26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26, §26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]
    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing the analyses;
    d. The analytical techniques or methods used;
    e. The results of such analyses; and
    f. The operating conditions existing at the time of sampling or measurement.

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and

maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26, §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   5301 Northshore Drive
   North Little Rock, AR 72118-5317

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit. The permittee shall make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
   a. The facility name and location
   b. The process unit or emission source deviating from the permit limit,
   c. The permit limit, including the identification of pollutants, from which deviation occurs,
   d. The date and time the deviation started,
   e. The duration of the deviation,
   f. The average emissions during the deviation,
   g. The probable cause of such deviations,
   h. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
   i. The name of the person submitting the report.

   The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report. [40 CFR 70.6(a)(3)(iii)(B), Regulation 26, §26.701(C)(3)(b), Regulation 19, §19.601 and §19.602]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26, §26.701(E), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26, §26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26, §26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26, §26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26, §26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26, §26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26, §26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26, §26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26, §26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26, §26.702(A) and (B)]

19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26, §26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26, §26.703(B)]
    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
    d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26, §26.703(E)(3)]
    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit;
    e. and Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Regulation 26, §26.704(C)] The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance; the applicable requirements of the acid rain program, consistent with §408(a) of the Act or, the ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

APPENDIX A

(CEMS Conditions)

Arkansas Department of Environmental Quality

CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised August 2004

PREAMBLE

These conditions are intended to outline the requirements for facilities required to operate Continuous Emission Monitoring Systems/Continuous Opacity Monitoring Systems (CEMS)/(COMS). Generally there are three types of sources required to operate CEMS/COMS:

1. CEMS/COMS required by 40 CFR Part 60 or 63,
2. CEMS required by 40 CFR Part 75,
3. CEMS/COMS required by ADEQ permit for reasons other that Part 60, 63 or 75.

These CEMS/COMS conditions are not intended to supercede Part 60, 63 or 75 requirements.

- Only CEMS/COMS in the third category (those required by ADEQ permit for reasons other than Part 60, 63 or 75) shall comply with SECTION II, MONITORING REQUIREMENTS and SECTION IV, QUALITY ASSURANCE/QUALITY CONTROL.

- All CEMS/COMS shall comply with Section III, NOTIFICATION AND RECORDKEEPING.

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data.

Continuous Opacity Monitoring System (COMS) - The total equipment required for the determination of opacity as to include sampling, analysis and recording of emission data.

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place.

Back-up CEMS (Secondary CEMS) - A CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEMS is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Excess Emissions - Any period in which the emissions exceed the permit limits.

Monitor Downtime - Any period during which the CEMS/COMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Out-of-Control Period - Begins with the time corresponding to the completion of the fifth, consecutive, daily CD check with a CD in excess of two times the allowable limit, or the time corresponding to the completion of the daily CD check preceding the daily CD check that results in a CD in excess of four times the allowable limit and the time corresponding to the completion of the sampling for the RATA, RAA, or CGA which exceeds the limits outlined in Section IV. Out-of-Control Period ends with the time corresponding to the completion of the CD check following corrective action with the results being within the allowable CD limit or the completion of the sampling of the subsequent successful RATA, RAA, or CGA.

Primary CEMS - The main reporting CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate.

Relative Accuracy (RA) - The absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference method tests of the applicable emission limit.

Span Value – The upper limit of a gas concentration measurement range.

SECTION II

MONITORING REQUIREMENTS

A. For new sources, the installation date for the CEMS/COMS shall be no later than thirty (30) days from the date of start-up of the source.

B. For existing sources, the installation date for the CEMS/COMS shall be no later than sixty (60) days from the issuance of the permit unless the permit requires a specific date.

C. Within sixty (60) days of installation of a CEMS/COMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PSTs for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the ADEQ CEM Coordinator prior to testing.

D. Each CEMS/COMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded.

E. All CEMS/COMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Percent of monitor down-time is calculated by dividing the total minutes the monitor is not in operation by the total time in the calenda quarter and multiplying by one hundred. Failure to maintain operation time shall constitute a violation of the CEMS conditions.

F. Percent of excess emissions are calculated by dividing the total minutes of excess emissions by the total time the source operated and multiplying by one hundred. Failure to maintain compliance may constitute a violation of the CEMS conditions.

F. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit.

H. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

J. When the pollutant from a single affected facility is released through more than one point, a CEMS/COMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the ADEQ CEM Coordinator. When more than one CEM/COM is used to monitor emissions from one affected facility the owner or operator shall report the results as required from each CEMS/COMS.

SECTION III

NOTIFICATION AND RECORD KEEPING

A. When requested to do so by an owner or operator, the ADEQ CEM Coordinator will review plans for installation or modification for the purpose of providing technical advice to the owner or operator.

B. Each facility which operates a CEMS/COMS shall notify the ADEQ CEM Coordinator of the date for which the demonstration of the CEMS/COMS performance will commence (i.e. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 days prior to testing. Performance test results shall be submitted to the Department within thirty days after completion of testing.

C. Each facility which operates a CEMS/COMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.

D. Except for Part 75 CEMs, each facility required to install a CEMS/COMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, CEM Coordinator) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter. Part 75 CEMs shall submit this information semi-annually and as part of Title V six (6) month reporting requirement if the facility is a Title V facility.

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADEQ Quarterly Excess Emission Report Forms. Alternate forms may be used with prior written approval from the Department.

F. Each facility which operates a CEMS/COMS must maintain on site a file of CEMS/COMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for a period of at least five years, and is required to be maintained in such a condition that it can easily be audited by an inspector.

G. Except for Part 75 CEMs, quarterly reports shall be used by the Department to determine compliance with the permit. For Part 75 CEMs, the semi-annual report shall be used.

SECTION IV

QUALITY ASSURANCE/QUALITY CONTROL

A. For each CEMS/COMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, CEM Coordinator). CEMS quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS/COMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS/COMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

C. Facilities responsible for one, or more, CEMS/COMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

1. Calibration of CEMS/COMS
    a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS/COMS
    a. Out-of-control period determination
    b. Steps of corrective action
3. Preventive maintenance of CEMS/COMS
    a. CEMS/COMS information
        1) Manufacture
        2) Model number
        3) Serial number
    b. Scheduled activities (check list)
    c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS/COMS

D. A Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA should be conducted in accordance with the applicable test procedure in 40 CFR Part 60 Appendix A and calculated in accordance with the applicable performance specification in 40 CFR Part 60 Appendix B. CGA's and RAA's should be conducted and the data calculated in accordance with the procedures outlined on 40 CFR Part 60 Appendix F.

If alternative testing procedures or methods of calculation are to be used in the RATA, RAA or CGA audits prior authorization must be obtained from the ADEQ CEM Coordinator.

E. Criteria for excessive audit inaccuracy.

RATA

All Pollutants except Carbon Monoxide	> 20% Relative Accuracy
Carbon Monoxide	> 10% Relative Accuracy
All Pollutants except Carbon Monoxide	> 10% of the Applicable Standard
Carbon Monoxide	> 5% of the Applicable Standard
Diluent (O_2 & CO_2)	> 1.0 % O2 or CO2
Flow	> 20% Relative Accuracy

CGA

Pollutant	> 15% of average audit value or 5 ppm difference
Diluent (O_2 & CO_2)	> 15% of average audit value or 5 ppm difference

RAA

Pollutant	> 15% of the three run average or > 7.5 % of the applicable standard
Diluent (O_2 & CO_2)	> 15% of the three run average or > 7.5 % of the applicable standard

F. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. If the CEMS exceeds the audit inaccuracies listed above, the CEMS is out-of-control. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart. The end of the out-of-control period is the time corresponding to the completion of the successful daily zero or span drift or completion of the successful CGA, RAA or RATA.

G. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEMS is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEMS shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minimum the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

APPENDIX B

(Regulation 19, Chapter 8)

CHAPTER 8: 111(D) DESIGNATED FACILITIES

Reg. 19.801 Purpose

The purpose of this chapter is to establish regulations for designated pollutants emitted from designated facilities in accordance with Section 111(d) of the Clean Air Act.

Reg. 19.802

No person shall cause or permit emissions from equipment located at facilities described in this chapter to be exceeded. Future permit conditions may place more stringent emissions limitations on the equipment which shall supersede the limitations of this section.

Reg. 19.803 Sulfuric Acid Plants (H_2SO_4 Mist)

(A) El Dorado Chemical Company (AFIN 7000040) of El Dorado shall not exceed the following emission limitation after November 1, 1980:

(1) Sulfuric Acid Plant - 0.5 lb H_2SO_4 mist/ton 100% acid.

(2) [RESERVED]

(B) Compliance testing shall be performed using EPA Method #8 (40 CFR Part 60 Appendix A) at intervals specified in the applicable permit.

Reg. 19.804 Kraft Pulp Mills (TRS)

(A) Affected Facilities

Equipment located at the following kraft pulp mills are affected by the provisions of this subsection. The total reduced sulfur (TRS) emissions limitations are contained in Table 19.8.1.

(1) International Paper Company (AFIN 3500016) of Pine Bluff.

(2) Green Bay Packaging, Arkansas Kraft Division (AFIN 1500001) of Morrilton.

(3) Delta National Kraft (AFIN 3500017) of Pine Bluff.

(4) Georgia-Pacific Corporation (AFIN 0200013) of Crossett.

(5) Georgia-Pacific Corporation (AFIN 4100002) of Ashdown.

(6) Potlatch Corporation (AFIN 2100036) of McGehee.

(B) Compliance Testing Requirements

All designated equipment in Table 19.8.1 shall have annual compliance testing of TRS emissions performed using EPA Method 16. Data reduction shall be performed as set forth in 40 CFR 60.8. Annual compliance testing will not be required for equipment with a continuous TRS emissions monitor.

(C) Continuous Monitoring Requirements

Any equipment located at the above designated facilities shall conduct TRS continuous monitoring in accordance with the requirements of 40 CFR 60.284 (date of installation not withstanding). The continuous monitoring systems shall be operated according to the provisions of 40 CFR 60.284 by April 1, 1993, except that continuous emissions monitors for affected lime kilns shall be installed and certified by January 1, 1994.

Table 19.8.1 Kraft Pulp Mill TRS Emission Limits

AFIN	Facility	Equipment	TRS Concentration
5200013	IP Camden	recovery furnace	40 ppm
		lime kiln	40 ppm
		smelt dissolving tank	0.0168 g/kg
3500016	IP Pine Bluff	recovery furnace	40 ppm
		lime kiln	40 ppm
		smelt dissolving tank	0.0168 g/kg

Table 19.8.1 Kraft Pulp Mill TRS Emission Limits

AFIN	Facility	Equipment	TRS Concentration
1500001	Green Bay Packaging, Arkansas Kraft Division	recovery furnace	40 ppm
		lime kiln	40 ppm
		smelt dissolving tank	0.0168 g/kg

APPENDIX C
(40 CFR Part 63, Subpart S)

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart S—National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

Source: 63 FR 18617, Apr. 15, 1998, unless otherwise noted.

§ 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 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.

(d) Each existing source shall achieve compliance no later than April 16, 2001, except as provided in paragraphs (d)(1) through (d)(3) of this section.

(1) Each kraft pulping system shall achieve compliance with the pulping system provisions of §63.443 for the equipment listed in §63.443(a)(1)(ii) through (a)(1)(v) as expeditiously as practicable, but in no event later than April 17, 2006 and the owners and operators shall establish dates, update dates, and report the dates for the milestones specified in §63.455(b).

(2) Each dissolving-grade bleaching system at either kraft or sulfite pulping mills shall achieve compliance with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than 3 years after the promulgation of the revised effluent limitation guidelines and standards under 40 CFR 430.14 through 430.17 and 40 CFR 430.44 through 430.47.

(3) Each bleaching system complying with the Voluntary Advanced Technology Incentives Program for Effluent Limitation Guidelines in 40 CFR 430.24, shall comply with the requirements specified in either paragraph (d)(3)(i) or (d)(3)(ii) of this section for the effluent limitation guidelines and standards in 40 CFR 430.24.

(i) Comply with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than April 16, 2001.

(ii) Comply with paragraphs (d)(3)(ii)(A), (d)(3)(ii)(B), and (d)(3)(ii)(C) of this section.

(A) The owner or operator of a bleaching system shall comply with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than April 15, 2004.

(B) The owner or operator of a bleaching system shall comply with the requirements specified in either paragraph (d)(3)(ii)(B)(*1*) or (d)(3)(ii)(B)(*2*) of this section.

(*1*) Not increase the application rate of chlorine or hypochlorite in kilograms (kg) of bleaching agent per megagram of ODP, in the bleaching system above the average daily rates used over the three months prior to June 15, 1998 until the requirements of paragraph (d)(3)(ii)(A) of this section are met and record application rates as specified in §63.454(c).

(*2*) Comply with enforceable effluent limitations guidelines for 2,3,7,8-tetrachloro-dibenzo-p-dioxin and adsorbable organic halides at least as stringent as the baseline BAT levels set out in 40 CFR 430.24(a)(1) as expeditiously as possible, but in no event later than April 16, 2001.

(C) Owners and operators shall establish dates, update dates, and report the dates for the milestones specified in §63.455(b).

(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.

[63 FR 18617, Apr. 15, 1998, as amended at 63 FR 71389, Dec. 28, 1998]

§ 63.441 Definitions.

All terms used in this subpart shall have the meaning given them in the CAA, in subpart A of this part, and in this section as follows:

Acid condensate storage tank means any storage tank containing cooking acid following the sulfur dioxide gas fortification process.

Black liquor means spent cooking liquor that has been separated from the pulp produced by the kraft, soda, or semi-chemical pulping process.

Bleaching means brightening of pulp by the addition of oxidizing chemicals or reducing chemicals.

Bleaching line means a group of bleaching stages arranged in series such that bleaching of the pulp progresses as the pulp moves from one stage to the next.

Bleaching stage means all process equipment associated with a discrete step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps, and any other equipment serving the same function as those previously listed.

Bleaching system means all process equipment after high-density pulp storage prior to the first application of oxidizing chemicals or reducing chemicals following the pulping system, up to and including the final bleaching stage.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam. A boiler is not considered a thermal oxidizer.

Chip steamer means a vessel used for the purpose of preheating or pretreating wood chips prior to the digester, using flash steam from the digester or live steam.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit of equipment, including but not limited to, a thermal oxidizer, lime kiln, recovery furnace, process heater, or boiler, used for the thermal oxidation of organic hazardous air pollutant vapors.

Decker system means all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to high-density pulp storage. The decker system includes decker vents, filtrate tanks, associated vacuum pumps, and any other equipment serving the same function as those previously listed.

Digester system means each continuous digester or each batch digester used for the chemical treatment of wood or non-wood fibers. The digester system equipment includes associated flash tank(s), blow tank(s), chip steamer(s) not using fresh steam, blow heat recovery accumulator(s), relief gas condenser(s), prehydrolysis unit(s) preceding the pulp washing system, and any other equipment serving the same function as those previously listed. The digester system includes any of the liquid streams or condensates associated with batch or continuous digester relief, blow, or flash steam processes.

Emission point means any part of a stationary source that emits hazardous air pollutants regulated under this subpart, including emissions from individual process vents, stacks, open pieces of process equipment, equipment leaks, wastewater and condensate collection and treatment system units, and those emissions that could reasonably be conveyed through a stack, chimney, or duct where such emissions first reach the environment.

Evaporator system means all equipment associated with increasing the solids content and/or concentrating spent cooking liquor from the pulp washing system including pre-evaporators, multi-effect evaporators, concentrators, and vacuum systems, as well as associated condensers, hotwells, and condensate streams, and any other equipment serving the same function as those previously listed.

Flow indicator means any device that indicates gas or liquid flow in an enclosed system.

HAP means a hazardous air pollutant as defined in §63.2 of subpart A of this part.

High volume, low concentration or HVLC collection system means the gas collection and transport system used to convey gases from the HVLC system to a control device.

High volume, low concentration or HVLC system means the collection of equipment including the pulp washing, knotter, screen, decker, and oxygen delignification systems, weak liquor storage tanks, and any other equipment serving the same function as those previously listed.

Knotter system means equipment where knots, oversized material, or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system.

The knotter system equipment includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function as those previously listed.

Kraft pulping means a chemical pulping process that uses a mixture of sodium hydroxide and sodium sulfide as the cooking liquor.

Lime kiln means an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide.

Low volume, high concentration or LVHC collection system means the gas collection and transport system used to convey gases from the LVHC system to a control device.

Low volume, high concentration or LVHC system means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed.

Mechanical pulping means a pulping process that only uses mechanical and thermo-mechanical processes to reduce wood to a fibrous mass. The mechanical pulping processes include, but are not limited to, stone groundwood, pressurized groundwood, refiner mechanical, thermal refiner mechanical, thermo-mechanical, and tandem thermo-mechanical.

Non-wood pulping means the production of pulp from fiber sources other than trees. The non-wood fiber sources include, but are not limited to, bagasse, cereal straw, cotton, flax straw, hemp, jute, kenaf, and leaf fibers.

Oven-dried pulp or ODP means a pulp sample at zero percent moisture content by weight. Pulp samples for applicability or compliance determinations for both the pulping and bleaching systems shall be unbleached pulp. For purposes of complying with mass emission limits in this subpart, megagram of ODP shall be measured to represent the amount of pulp entering and processed by the equipment system under the specified mass limit. For equipment that does not process pulp, megagram of ODP shall be measured to represent the amount of pulp that was processed to produce the gas and liquid streams.

Oxygen delignification system means the equipment that uses oxygen to remove lignin from pulp after high-density stock storage and prior to the bleaching system. The oxygen delignification system equipment includes the blow tank, washers, filtrate tanks, any interstage pulp storage tanks, and any other equipment serving the same function as those previously listed.

Primary fuel means the fuel that provides the principal heat input to the combustion device. To be considered primary, the fuel must be able to sustain operation of the combustion device without the addition of other fuels.

Process wastewater treatment system means a collection of equipment, a process, or specific technique that removes or destroys the HAPs in a process wastewater stream. Examples include, but are not limited to, a steam stripping unit, wastewater thermal oxidizer, or biological treatment unit.

Pulp washing system means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.

Pulping line means a group of equipment arranged in series such that the wood chips are digested and the resulting pulp progresses through a sequence of steps that may include knotting, refining, washing, thickening, blending, storing, oxygen delignification, and any other equipment serving the same function as those previously listed.

Pulping process condensates means any HAP-containing liquid that results from contact of water with organic compounds in the pulping process. Examples of process condensates include digester system condensates, turpentine recovery system condensates, evaporator system condensates, LVHC system condensates, HVLC system condensates, and any other condensates from equipment serving the same function as those previously listed. Liquid streams that are intended for byproduct recovery are not considered process condensate streams.

Pulping system means all process equipment, beginning with the digester system, and up to and including the last piece of pulp conditioning equipment prior to the bleaching system, including treatment with ozone, oxygen, or peroxide before the first application of a chemical bleaching agent intended to brighten pulp. The pulping system includes pulping process condensates and can include multiple pulping lines.

Recovery furnace means an enclosed combustion device where concentrated spent liquor is burned to recover sodium and sulfur, produce steam, and dispose of unwanted dissolved wood components in the liquor.

Screen system means equipment in which oversized particles are removed from the pulp slurry prior to the bleaching or papermaking system washed stock storage.

Secondary fiber pulping means a pulping process that converts a fibrous material, that has previously undergone a manufacturing process, into pulp stock through the addition of water and mechanical energy. The mill then uses that pulp as the raw material in another manufactured product. These mills may also utilize chemical, heat, and mechanical processes to remove ink particles from the fiber stock.

Semi-chemical pulping means a pulping process that combines both chemical and mechanical pulping processes. The semi-chemical pulping process produces intermediate yields ranging from

55 to 90 percent.

Soda pulping means a chemical pulping process that uses sodium hydroxide as the active chemical in the cooking liquor.

Spent liquor means process liquid generated from the separation of cooking liquor from pulp by the pulp washing system containing dissolved organic wood materials and residual cooking compounds.

Steam stripper system means a column (including associated stripper feed tanks, condensers, or heat exchangers) used to remove compounds from wastewater or condensates using steam. The steam stripper system also contains all equipment associated with a methanol rectification process including rectifiers, condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed.

Strong liquor storage tanks means all storage tanks containing liquor that has been concentrated in preparation for combustion or oxidation in the recovery process.

Sulfite pulping means a chemical pulping process that uses a mixture of sulfurous acid and bisulfite ion as the cooking liquor.

Temperature monitoring device means a piece of equipment used to monitor temperature and having an accuracy of ±1.0 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 degrees Celsius (°C), whichever is greater.

Thermal oxidizer means an enclosed device that destroys organic compounds by thermal oxidation.

Turpentine recovery system means all equipment associated with recovering turpentine from digester system gases including condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed. The turpentine recovery system includes any liquid streams associated with the turpentine recovery process such as turpentine decanter underflow. Liquid streams that are intended for byproduct recovery are not considered turpentine recovery system condensate streams.

Weak liquor storage tank means any storage tank except washer filtrate tanks containing spent liquor recovered from the pulping process and prior to the evaporator system.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999]

§ 63.442 [Reserved]

§ 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).

(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:

(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 (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:

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

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

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

and HVLC systems.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999; 66 FR 80762, Dec. 22, 2000]

§ 63.444 Standards for the pulping system at sulfite processes.

(a) The owner or operator of each sulfite process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (b) and (c) of this section.

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

(i) Each digester system vent;

(ii) Each evaporator system vent; and

(iii) Each pulp washing system.

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

(i) Each weak liquor storage tank;

(ii) Each strong liquor storage tank; and

(iii) Each acid condensate storage tank.

(b) Equipment listed in paragraph (a) 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 (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. Emissions from equipment listed in paragraph (a) of this section that is not necessary to be reduced to meet paragraph (c) of this section is not required to be routed to a control device.

(c) The total HAP emissions from both the equipment systems listed in paragraph (a) of this section and the vents, wastewater, and condensate streams from the control device used to reduce HAP emissions, shall be controlled as follows.

(1) Each calcium-based or sodium-based sulfite pulping process shall:

(i) Emit no more than 0.44 kilograms of total HAP or methanol per megagram (0.89 pounds per ton) of ODP; or

(ii) Remove 92 percent or more by weight of the total HAP or methanol.

(2) Each magnesium-based or ammonium-based sulfite pulping process shall:

(i) Emit no more than 1.1 kilograms of total HAP or methanol per megagram (2.2 pounds per ton) of ODP; or

(ii) Remove 87 percent or more by weight of the total HAP or methanol.

§ 63.445 Standards for the bleaching system.

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

(1) Bleaching systems that use chlorine;

(2) Bleaching systems bleaching pulp from kraft, sulfite, or soda pulping processes that use any chlorinated compounds; or

(3) Bleaching systems bleaching pulp from mechanical pulping processes using wood or from any process using secondary or non-wood fibers, that use chlorine dioxide.

(b) The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. If process modifications are used to achieve compliance with the emission limits specified in paragraphs (c)(2) or (c)(3), enclosures and closed-vent systems are not required, unless appropriate.

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

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

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

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

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

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

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

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

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

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

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

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999

§ 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:

(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) 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; or

(5) At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram (10.2 pounds per ton) of ODP, or achieve a total HAP concentration of 330 parts per million or less by weight at the outlet of the control device.

(f) Each HAP removed from a pulping process condensate stream during treatment and handling under paragraphs (d) or (e) of this section, except for those treated according to paragraph (e)(2) of this section, shall be controlled as specified in §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 (e)(5) of this section, periods of excess emissions reported under §63.455 shall not be a violation of paragraphs (d), (e)(3) through (e)(5), and (f) of this section provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent. 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 to comply with the Clean Water Act).

(h) Each owner or operator of a new or existing affected source subject to the requirements of this section shall evaluate all new or modified pulping process condensates or changes in the annual bleached or non-bleached ODP used to comply with paragraph (i) of this section, to determine if they meet the applicable requirements of this section.

(i) For the purposes of meeting the requirements in paragraph (c)(2) or (3) or paragraph (e)(4) or (5) of this section at mills producing both bleached and unbleached pulp products, owners and operators may meet a prorated mass standard that is calculated by prorating the applicable mass standards (kilograms of total HAP per megagram of ODP) for bleached and unbleached mills specified in paragraph (c)(2) or (3) or paragraph (e)(4) or (5) of this section by the ratio of annual megagrams of bleached and unbleached ODP.

[63 FR 18617, Apr. 15, 1998; 63 FR 42239, Aug. 7, 1998, as amended at 63 FR 49459, Sept. 16, 1998; 64 FR 17563, Apr. 12, 1999; 65 FR 80762, Dec. 22, 2000]

§ 63.447 Clean condensate alternative.

As an alternative to the requirements specified in §63.443(a)(1)(ii) through (a)(1)(v) for the control of HAP emissions from pulping systems using the kraft process, an owner or operator must demonstrate to the satisfaction of the Administrator, by meeting all the requirements below, that the total HAP emissions reductions achieved by this clean condensate alternative technology are equal to or greater than the total HAP emission reductions that would have been achieved by compliance with §63.443(a)(1)(ii) through (a)(1)(v).

(a) For the purposes of this section only the following additional definitions apply.

(1) *Clean condensate alternative affected source* means the total of all HAP emission points in the pulping, bleaching, causticizing, and papermaking systems (exclusive of HAP emissions attributable to additives to paper machines and HAP emission points in the LVHC system).

(2) *Causticizing system* means all equipment associated with converting sodium carbonate into active sodium hydroxide. The equipment includes smelt dissolving tanks, lime mud washers and storage tanks, white and mud liquor clarifiers and storage tanks, slakers, slaker grit washers, lime kilns, green liquor clarifiers and storage tanks, and dreg washers ending with the white liquor storage tanks prior to the digester system, and any other equipment serving the same function as those previously listed.

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

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

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

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

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

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

(i) The pulping process condensates requirements in §63.446;

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

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

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

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

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

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

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

(1) A detailed description of:

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

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

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

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

(h) Each owner or operator shall report to the Administrator by the applicable compliance date specified in §63.440(d) or (e) the rationale, calculations, test procedures, and data documentation used to demonstrate compliance with all the requirements of this section.

[63 FR 18617, Apr. 15, 1998; 63 FR 42239, Aug. 7, 1998, as amended at 64 FR 17563, Apr. 12, 1999]

§§ 63.448-63.449 [Reserved]

§ 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.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999; 68 FR 37348, June 23, 2003]

§§ 63.451-63.452 [Reserved]

§ 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 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.

(c) A CMS shall be operated to measure the following parameters for each gas scrubber used to comply with the bleaching system requirements of §63.445(c) or the sulfite pulping system requirements of §63.444(c).

(1) The pH or the oxidation/reduction potential of the gas scrubber effluent;

(2) The gas scrubber vent gas inlet flow rate; and

(3) The gas scrubber liquid influent flow rate.

(d) As an option to the requirements specified in paragraph (c) of this section, a CMS shall be operated to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching system outlet concentration requirement specified in §63.445(c)(2).

(e) The owner or operator of a bleaching system complying with 40 CFR 430.24, shall monitor the chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system during the extended compliance period specified in §63.440(d)(3).

(f) A CMS shall be operated to measure the gas scrubber parameters specified in paragraphs (c)(1) through (c)(3) of this section or those site specific parameters determined according to the procedures specified in paragraph (n) of this section to comply with the sulfite pulping system requirements specified in §63.444(c).

(g) A CMS shall be operated to measure the following parameters for each steam stripper used to comply with the treatment requirements in §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).

(j) Each owner or operator using an open biological treatment system to comply with §63.446(e)(2) shall perform the daily monitoring procedures specified in either paragraph (j)(1) or (2) of this section and shall conduct a performance test each quarter using the procedures specified in paragraph (j)(3) of this section.

(1) Comply with the monitoring and sampling requirements specified in paragraphs (j)(1)(i) and (ii) of this section.

(i) On a daily basis, monitor the following parameters for each open biological treatment unit:

(A) Composite daily sample of outlet soluble BOD_5 concentration to monitor for maximum daily and maximum monthly average;

(B) Mixed liquor volatile suspended solids;

(C) Horsepower of aerator unit(s);

(D) Inlet liquid flow; and

(E) Liquid temperature.

(ii) If the Inlet and Outlet Concentration Measurement Procedure (Procedure 3) in appendix C of this part is used to determine the fraction of HAP compounds degraded in the biological treatment system as specified in §63.457(l), conduct the sampling and archival requirements specified in paragraphs (j)(1)(ii)(A) and (B) of this section.

(A) Obtain daily inlet and outlet liquid grab samples from each biological treatment unit to have HAP data available to perform quarterly performance tests specified in paragraph (j)(3) of this section and the compliance tests specified in paragraph (p) of this section.

(B) Store the samples as specified in §63.457(n) until after the results of the soluble BOD_5 test required in paragraph (j)(1)(i)(A) of this section are obtained. The storage requirement is needed since the soluble BOD_5 test requires 5 days or more to obtain results. If the results of the soluble BOD_5 test are outside of the range established during the initial performance test, then the archive sample shall be used to perform the mass removal or percent reduction determinations.

(2) As an alternative to the monitoring requirements of paragraph (j)(1) of this section, conduct daily monitoring of the site-specific parameters established according to the procedures specified in paragraph (n) of this section.

(3) Conduct a performance test as specified in §63.457(l) within 45 days after the beginning of each quarter and meet the applicable emission limit in §63.446(e)(2).

(i) The performance test conducted in the first quarter (annually) shall be performed for total HAP as specified in §63.457(g) and meet the percent reduction or mass removal emission limit specified in §63.446(e)(2).

(ii) The remaining quarterly performance tests shall be performed as specified in paragraph (j)(3)(i) of this section except owners or operators may use the applicable methanol procedure in §63.457(l)(1) or (2) and the value of r determined during the first quarter test instead of measuring the additional HAP to determine a new value of r.

(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 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 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.

(p) The procedures of this paragraph apply to each owner or operator of an open biological treatment system complying with paragraph (j) of this section whenever a monitoring parameter excursion occurs, and the owner or operator chooses to conduct a performance test to demonstrate compliance with the applicable emission limit. A monitoring parameter excursion occurs whenever the monitoring parameters specified in paragraphs (j)(1)(i)(A) through (C) of this section or any of the monitoring parameters specified in paragraph (j)(2) of this section are below minimum operating parameter values or above maximum operating parameter values established in paragraph (n) of this section.

(1) As soon as practical after the beginning of the monitoring parameter excursion, the following requirements shall be met:

(i) Before the steps in paragraph (p)(1)(ii) or (iii) of this section are performed, all sampling and measurements necessary to meet the requirements in paragraph (p)(2) of this section shall be conducted.

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

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

(2) A parameter excursion is not a violation of the applicable emission standard if the results of the performance test conducted using the procedures in this paragraph demonstrate compliance with the applicable emission limit in §63.446(e)(2).

(i) Conduct a performance test as specified in §63.457 using the monitoring data specified in paragraph (j)(1) or (2) of this section that coincides with the time of the parameter excursion. No maintenance or changes shall be made to the open biological treatment system after the beginning of a parameter excursion that would influence the results of the performance test.

(ii) If the results of the performance test specified in paragraph (p)(2)(i) of this section demonstrate compliance with the applicable emission limit in §63.446(e)(2), then the parameter excursion is not a violation of the applicable emission limit.

(iii) If the results of the performance test specified in paragraph (p)(2)(i) of this section do not demonstrate compliance with the applicable emission limit in §63.446(e)(2) because the total HAP mass entering the open biological treatment system is below the level needed to demonstrate compliance with the applicable emission limit in §63.446(e)(2), then the owner or operator shall perform the following comparisons:

(A) If the value of f_{bio} (MeOH) determined during the performance test specified in paragraph (p)(2)(i) of this section is within the range of values established during the initial and subsequent performance tests approved by the Administrator, then the parameter excursion is not a violation of the applicable standard.

(B) If the value of f_{bio} (MeOH) determined during the performance test specified in paragraph (p)(2)(i) of this section is not within the range of values established during the initial and subsequent performance tests approved by the Administrator, then the parameter excursion is a violation of the applicable standard.

(iv) The results of the performance test specified in paragraph (p)(2)(i) of this section shall be recorded as specified in §63.454(f).

(3) If an owner or operator determines that performing the required procedures under paragraph (p)(2) of this section for a nonthoroughly mixed open biological system would expose a worker to dangerous, hazardous, or otherwise unsafe conditions, all of the following procedures shall be performed:

(i) Calculate the mass removal or percent reduction value using the procedures specified in §63.457(l) except the value for f_{bio} (MeOH) shall be determined using the procedures in appendix E to this part.

(ii) Repeat the procedures in paragraph (p)(3)(i) of this section for every day until the unsafe conditions have passed.

(iii) A parameter excursion is a violation of the standard if the percent reduction or mass removal determined in paragraph (p)(3)(i) of this section is less than the percent reduction or mass removal standards specified in §63.446(e)(2), as appropriate, unless the value of f_{bio} (MeOH) determined using the procedures in appendix E of this section, as specified in paragraph (p)(3)(i), is within the range of f_{bio} (MeOH) values established during the initial and subsequent performance tests previously approved by the Administrator.

(iv) The determination that there is a condition that exposes a worker to dangerous, hazardous, or otherwise unsafe conditions shall be documented according to requirements in §63.454(e) and reporting in §63.455(f).

(v) The requirements of paragraphs (p)(1) and (2) of this section shall be performed and met as soon as practical but no later than 24 hours after the conditions have passed that exposed a worker to dangerous, hazardous, or otherwise unsafe conditions.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999; 65 FR 80762, Dec. 22, 2000]

§ 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 (f) 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) The owner or operator of a bleaching system complying with §63.440(d)(3)(ii)(B) shall record the daily average chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system until the requirements specified in §63.440(d)(3)(ii)(A) are met.

(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.

(f) The owner or operator of an open biological treatment system complying with §63.453(p) shall prepare a written record specifying the results of the performance test specified in §63.453(p)(2).

[63 FR 18617, Apr. 15, 1998, as amended at 65 FR 80763, Dec. 22, 2000; 68 FR 37348, June 23, 2003]

§ 63.455 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of subpart A of this part as specified in table 1 and all the following requirements in this section. The initial notification report specified under §63.9(b)(2) of subpart A of this part shall be submitted by April 15, 1999.

(b) Each owner or operator of a kraft pulping system specified in §63.440(d)(1) or a bleaching system specified in §63.440(d)(3)(ii) shall submit, with the initial notification report specified under §63.9(b)(2) of subpart A of this part and paragraph (a) of this section and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in paragraphs (b)(1) through (b)(3) of this section in addition to the information required in §63.9(b)(2) of subpart A of this part.

(1) A description of the emission controls or process modifications selected for compliance with the control requirements in this standard.

(2) A compliance schedule, including the dates by which each step toward compliance will be reached for each emission point or sets of emission points. At a minimum, the list of dates shall include:

(i) The date by which the major study(s) for determining the compliance strategy will be completed;

(ii) The date by which contracts for emission controls or process modifications will be awarded, or the date by which orders will be issued for the purchase of major components to accomplish emission controls or process changes;

(iii) The date by which on-site construction, installation of emission control equipment, or a process change is to be initiated;

(iv) The date by which on-site construction, installation of emissions control equipment, or a process change is to be completed;

(v) The date by which final compliance is to be achieved;

(vi) For compliance with paragraph §63.440(d)(3)(ii), the tentative dates by which compliance with effluent limitation guidelines and standards intermediate pollutant load effluent reductions and as available, all the dates for the best available technology's milestones reported in the National Pollutant Discharge Elimination System authorized under section 402 of the Clean Water Act and for the best professional milestones in the Voluntary Advanced Technology Incentives Program under 40 CFR 430.24 (b)(2); and

(vii) The date by which the final compliance tests will be performed.

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

(c) The owner or operator of each bleaching system complying with §63.440(d)(3)(ii)(B) shall certify in the report specified under §63.10(e)(3) of subpart A of this part that the daily application rates of chlorine and hypochlorite for that bleaching system have not increased as specified in §63.440(d)(3)(ii)(B) until the requirements of §63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall meet the requirements specified in paragraph (a) of this section upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of this subpart due to a process change or modification.

(e) If the owner or operator uses the results of the performance test required in §63.453(p)(2) to revise the approved values or ranges of the monitoring parameters specified in §63.453(j)(1) or (2), the owner or operator shall submit an initial notification of the subsequent performance test to the Administrator as soon as practicable, but no later than 15 days, before the performance test required in §63.453(p)(2) is scheduled to be conducted. The owner or operator shall notify the Administrator as soon as practicable, but no later than 24 hours, before the performance test is scheduled to be conducted to confirm the exact date and time of the performance test.

(f) To comply with the open biological treatment system monitoring provisions of §63.453(p)(3), the owner or operator shall notify the Administrator as soon as practicable of the onset of the dangerous, hazardous, or otherwise unsafe conditions that did not allow a compliance determination to be conducted using the sampling and test procedures in §63.457(l). The notification shall occur no later than 24 hours after the onset of the dangerous, hazardous, or otherwise unsafe conditions and shall include the specific reason(s) that the sampling and test procedures in §63.457(l) could not be performed.

[63 FR 18617, Apr. 15, 1998, as amended at 65 FR 80763, Dec. 22, 2000]

§ 63.456 [Reserved]

§ 63.457 Test methods and procedures.

(a) *Initial performance test.* An initial performance test is required for all emission sources subject to the limitations in §§63.443, 63.444, 63.445, 63.446, and 63.447, except those controlled by a combustion device that is designed and operated as specified in §63.443(d)(3) or (d)(4).

(b) *Vent sampling port locations and gas stream properties.* For purposes of selecting vent sampling port locations and determining vent gas stream properties, required in §§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, 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, as appropriate.

(4) The moisture content of the vent gas shall be measured using Method 4 of part 60, appendix A.

(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 pollutant

concentrations using the following procedures.

(i) Method 308 in Appendix A of this part shall be used to determine the methanol concentration.

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

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

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

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

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

(*1*) Wash bottle filled with deionized water;

(*2*) 25 or 50 ml graduated burette and stand;

(*3*) Magnetic stirring apparatus and stir bar;

(*4*) Calibrated pH Meter;

(*5*) 150–250 ml beaker or flask; and

(*6*) A 5 ml pipette.

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

(*1*) To prepare the 1 molarity (M) potassium dihydrogen phosphate solution, dissolve 13.61 grams

(g) of potassium dihydrogen phosphate in water and dilute to 100 ml.

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

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

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

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

$$\begin{array}{c}\text{Normality of}\\ \textit{Sodium Thiosulfate}\end{array} = \frac{1}{\text{ml Sodium Thiosulfate Consumed}}$$

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

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

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

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

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

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

(4) *Sample Analysis.* Fill the burette with 0.01 N sodium thiosulfate solution to the zero mark. Combine the contents of the impingers in the beaker or flask. Stir the solution and titrate with thiosulfate until the solution is colorless. Record the volume of the first endpoint (TN, ml). Add 5 ml of the 10 percent sulfuric acid solution, and continue the titration until the contents of the flask are again colorless. Record the total volume of titrant required to go through the first and to the second endpoint (TA, ml). If the volume of neutral titer is less than 0.5 ml, repeat the testing for a longer period of time. It is important that sufficient lighting be present to clearly see the endpoints, which are determined when the solution turns from pale yellow to colorless. A lighted stirring plate and a white background are useful for this purpose.

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

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

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

Where:

S_C=Corrected (dry standard) sampling flow rate, liters per minute;

S_U=Uncorrected sampling flow rate, L/min;

BP=Barometric pressure at time of sampling;

PW=Saturated partial pressure of water vapor, mm Hg at temperature; and

t=Ambient temperature, °C.

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

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

Where:

T_N=Volume neutral titer, ml;

T_A=Volume acid titer (total), ml; and

N_{Thio}=Normality of sodium thiosulfate titrant.

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

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

Where:

S_C=Corrected (dry standard) sampling flow rate, liters per minute;

t_S=Time sampled, minutes;

T_N=Volume neutral titer, ml;

T_A=Volume acid titer (total), ml; and

N_{Thio}=Normality of sodium thiosulfate titrant.

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

$$C1O_2 Moles = 1/4000(T_A - T_N) \times N_{Thio}$$

Where:

T_A=Volume acid titer (total), ml;

T_N=Volume neutral titer, ml; and

N_{Thio}=Normality of sodium thiosulfate titrant.

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

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

Where:

S_C=Corrected (dry standard) sampling flow rate, liters per minute;

t_S=Time sampled, minutes;

T_A=Volume acid titer (total), ml;

T_N=Volume neutral titer, ml; and

N_{Thio}=Normality of sodium thiosulfate titrant.

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

(6) The minimum sampling time for each of the three 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

(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:

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

Where:

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

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

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

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

(ii) For determining methanol concentrations, NCASI Method DI/MEOH-94.02, Methanol in Process Liquids by GC/FID, August 1998, Methods Manual, NCASI, Research Triangle Park, NC. This test method is incorporated by reference in §63.14(f) of subpart A of this part.

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

(4) To determine soluble BOD_5 in the effluent stream from an open biological treatment unit used to comply with §§63.446(e)(2) and 63.453(j), the owner or operator shall use Method 405.1 of part 136 of this chapter with the following modifications:

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

(ii) Perform Method 405.1 on the filtrate obtained in paragraph (c)(4) of this section. Dilution water shall be seeded with 1 milliliter of final effluent per liter of dilution water. Dilution ratios may require adjustment to reflect the lower oxygen demand of the filtered sample in comparison to the total BOD_5. Three BOD bottles and different dilutions shall be used for each sample.

(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 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.

(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; 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;

(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).

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

(i) *Vent gas stream calculations.* To demonstrate compliance with the mass emission rate, mass emission rate per megagram of ODP, and percent reduction requirements for vent gas streams specified in §§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_i=Concentration on a dry basis of pollutant j in parts per million by volume as measured by the test methods specified in paragraph (b) of this section.

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

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

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

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

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

Where:

F=Mass emission rate of total HAP from the sampled vent, in kilograms per megagram of ODP.

E=Mass emission rate of total HAP from the sampled vent, in kilograms per hour determined as specified in paragraph (i)(1) of this section.

P=The production rate of pulp during the sampling period, in megagrams of ODP per hour.

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

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

Where:

R=Efficiency of control device, percent.

Ei=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, 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 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 shall be used to determine the oxygen concentration. The samples shall be taken at the same time that the HAP samples are taken.

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

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

Where:

C_c=Concentration of total HAP corrected to 10 percent oxygen, dry basis, parts per million by volume.

C_m=Concentration of total HAP dry basis, parts per million by volume, as specified in paragraph (b) of this section.

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

(l) *Biological treatment system percent reduction 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.

(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:

$$R = \frac{f_{bio}(\mathrm{MeOH})}{\left(1+1.087(r)\right)} * 100$$

$$r = \frac{F_{(nonmethanol)}}{F_{(methanol)}}$$

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:

$$F = F_b * \left(f_{bio}(MeOH) / \left(1+1.087(r)\right)\right)$$

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.

(3) The owner or operator of a nonthoroughly mixed open biological treatment system using the monitoring requirements specified in §63.453(p)(3) shall follow the procedures specified in section III.B.1 of appendix E of this part to determine the borate constant, Ks, and characterize the open biological treatment system during the initial and any subsequent performance tests.

(m) *Condensate segregation procedures.* The following procedures shall be used to demonstrate 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).

(n) *Open biological treatment system monitoring sampling storage.* The inlet and outlet grab samples required to be collected in §63.453(j)(1)(ii) shall be stored at 4 °C (40 °F) to minimize the biodegradation of the organic compounds in the samples.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17564, Apr. 12, 1999; 65 FR 80763, Dec. 22, 2000; 66 FR 24269, May 14, 2001]

§ 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 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.

[68 FR 37348, June 23, 2003]

§ 63.459 Alternative standards.

(a) *Flint River Mill.* The owner or operator of the pulping system using the kraft process at the manufacturing facility, commonly called Weyerhaeuser Company Flint River Operations, at Old Stagecoach Road, Oglethorpe, Georgia, (hereafter the Site) shall comply with all provisions of this subpart, except as specified in paragraphs (a)(1) through (a)(5) of this section.

(1) The owner or operator of the pulping system is not required to control total HAP emissions from equipment systems specified in paragraphs (a)(1)(i) and (a)(1)(ii) if the owner or operator complies with paragraphs (a)(2) through (a)(5) of this section.

(i) The brownstock diffusion washer vent and first stage brownstock diffusion washer filtrate tank vent in the pulp washing system specified in §63.443(a)(1)(iii).

(ii) The oxygen delignification system specified in §63.443(a)(1)(v).

(2) The owner or operator of the pulping system shall control total HAP emissions from equipment systems listed in paragraphs (a)(2)(i) through (a)(2)(ix) of this section as specified in §63.443(c) and (d) of this subpart no later than April 16, 2002.

(i) The weak liquor storage tank;

(ii) The boilout tank;

(iii) The utility tank;

(iv) The fifty percent solids black liquor storage tank;

(v) The south sixty-seven percent solids black liquor storage tank;

(vi) The north sixty-seven percent solids black liquor storage tank;

(vii) The precipitator make down tanks numbers one, two and three;

(viii) The salt cake mix tank; and

(ix) The NaSH storage tank.

(3) The owner and operator of the pulping system shall operate the Isothermal Cooking system at the site while pulp is being produced in the continuous digester at any time after April 16, 2002.

(i) The owner or operator shall monitor the following parameters to demonstrate that isothermal cooking is in operation:

(A) Continuous digester dilution factor; and

(B) The difference between the continuous digester vapor zone temperature and the continuous digester extraction header temperature.

(ii) The isothermal cooking system shall be in operation when the continuous digester dilution factor and the temperature difference between the continuous digester vapor zone temperature and the continuous digester extraction header temperature are maintained as set forth in Table 2:

Table 2 to Subpart S Isothermal Cooking System Operational Values

Parameter	Instrument number	Limit	Units
Digester Dilution Factor......... ..	K1DILFAC...............	>0.0............	None
Difference in Digester Vapor Zone	03TI0311..........	<10......	Degrees F. Temperature and Digester.
Extraction Header Temperature........	03TI0329............		

(iii) The owner or operator shall certify annually the operational status of the isothermal cooking system.

(4) [Reserved]

(5) *Definitions.* All descriptions and references to equipment and emission unit ID numbers refer to equipment at the Site. All terms used in this paragraph shall have the meaning given them in this part and this paragraph. For the purposes of this paragraph only the following

additional definitions apply:

Boilout tank means the tank that provides tank storage capacity for recovery of black liquor spills and evaporator water washes for return to the evaporators (emission unit ID No. U606);

Brownstock diffusion washer means the equipment used to wash pulp from the surge chests to further reduce lignin carryover in the pulp;

Continuous digester means the digester system used to chemically and thermally remove the lignin binding the wood chips to produce individual pulp fibers (emission unit ID No. P300);

Fifty percent solids black liquor storage tank means the tank used to store intermediate black liquor prior to final evaporation in the 1A, 1B, and 1C Concentrators (emission unit ID No. U605);

First stage brownstock diffusion washer means the equipment that receives and stores filtrate from the first stage of washing for return to the pressure diffusion washer;

Isothermal cooking system means the 1995–1996 modernization of brownstock pulping process including conversion of the Kamyr continuous vapor phase digester to an extended delignification unit and changes in the knotting, screening, and oxygen stage systems:

NaSH storage tank means the tank used to store sodium hydrosulfite solution prior to use as make-up to the liquor system

North sixty-seven percent solids black liquor storage tank means one of two tanks used to store black liquor prior to burning in the Recovery Boiler for chemical recovery (emission unit ID No. U501);

Precipitator make down tank numbers one, two and three mean tanks used to mix collected particulate from electrostatic precipitator chamber number one with 67% black liquor for recycle to chemical recovery in the Recovery Boiler (emission unit ID Nos. U504, U505 and U506);

Salt cake mix tank means the tank used to mix collected particulate from economizer hoppers with black liquor for recycle to chemical recovery in the Recovery Boiler (emission unit ID No. U503);

South sixty-seven percent solids black liquor storage tank means one of two tanks used to store black liquor prior to burning in the Recovery Boiler for chemical recovery (emission unit ID No. U502);

Utility tank means the tank used to store fifty percent liquor and, during black liquor tank inspections and repairs, to serve as a backup liquor storage tank (emission unit ID No. U611);

Weak gas system means high volume, low concentration or HVLC system as defined in §63.441; and

Weak liquor storage tank means the tank that provide surge capacity for weak black liquor from digesting prior to feed to multiple effect evaporators (emission unit ID No. U610).

(b) *Tomahawk Wisconsin Mill.* (1) *Applicability.* (i) The provisions of this paragraph (b) apply to the owner or operator of the stand-alone semi-chemical pulp and paper mill located at N9090 County Road E in Tomahawk, Wisconsin, referred to as the Tomahawk Mill.

(ii) The owner or operator is not required to comply with the provisions of this paragraph (b) if the owner and operator chooses to comply with the otherwise applicable sections of this subpart and provides the EPA with notice.

(iii) If the owner or operator chooses to comply with the provisions of this paragraph (b) the owner or operator shall comply with all applicable provisions of this part, including this subpart, except the following:

(A) Section 63.443(b);

(B) Section 63.443(c); and

(C) Section 63.443(d).

(2) *Collection and routing of HAP emissions.* (i) The owner or operator shall collect the total HAP emissions from each LVHC system.

(ii) Each LVHC system shall be enclosed and the HAP emissions shall be vented into a closed-vent system. The enclosures and closed-vent system shall meet requirements specified in paragraph (b)(6) of this section.

(iii) The HAP emissions shall be routed as follows:

(A) The HAP emissions collected in the closed-vent system from the digester system shall be routed through the primary indirect contact condenser, secondary indirect contact condenser, and evaporator indirect contact condenser; and

(B) The HAP emissions collected in the closed-vent system from the evaporator system and foul condensate standpipe shall be routed through the evaporator indirect contact condenser.

(3) *Collection and routing of pulping process condensates.* (i) The owner or operator shall collect the pulping process condensates from the following equipment systems:

(A) Primary indirect contact condenser;

(B) Secondary indirect contact condenser; and

(C) Evaporator indirect contact condenser.

(ii) The collected pulping process condensates shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraph (b)(7) of this section.

(iii) The collected pulping process condensates shall be routed in the closed collection system to the wastewater treatment plant anaerobic basins for biodegradation.

(iv) The pulping process condensates shall be discharged into the wastewater treatment plant anaerobic basins below the liquid surface of the wastewater treatment plant anaerobic basins.

(4) *HAP destruction efficiency requirements of the wastewater treatment plant.* (i) The owner or operator shall achieve a destruction efficiency of at least one pound of HAPs per ton of ODP by biodegradation in the wastewater treatment plant.

(ii) The following calculation shall be performed to determine the HAP destruction efficiency by biodegradation in the wastewater treatment plant:

$$HAP_d = \frac{\left[\left(RME_{fr} \times RME_c\right) + \left(PPC_{fr} \times PPC_c\right) - \left(ABD_{fr} \times ABD_c\right)\right] \times 8.34}{ODP_r}$$

Where:

HAP_d = HAP destruction efficiency of wastewater treatment plant (pounds of HAPs per ton of ODP);

RME_{fr} = flow rate of raw mill effluent (millions of gallons per day);

RME_c = HAP concentration of raw mill effluent (milligrams per liter);

PPC_{fr} = flow rate of pulping process condensates (millions of gallons per day);

PPC_c = HAP concentration of pulping process condensates (milligrams per liter);

ABD_{fr} = flow rate of anaerobic basin discharge (millions of gallons per day);

ABD_c = HAP concentration of anaerobic basin discharge (milligrams per liter); and

ODP_r = rate of production of oven dried pulp (tons per day).

(5) *Monitoring requirements and parameter ranges.* (i) The owner or operator shall install, calibrate, operate, and maintain according to the manufacturer's specifications a continuous monitoring system (CMS, as defined in §63.2), using a continuous recorder, to monitor the

following parameters:

(A) Evaporator indirect contact condenser vent temperature;

(B) Pulping process condensates flow rate;

(C) Wastewater treatment plant effluent flow rate; and

(D) Production rate of ODP.

(ii) The owner or operator shall additionally monitor, on a daily basis, in each of the four anaerobic basins, the ratio of volatile acid to alkalinity (VA/A ratio). The owner or operator shall use the test methods identified for determining acidity and alkalinity as specified in 40 CFR 136.3, Table 1B.

(iii) The temperature of the evaporator indirect contact condenser vent shall be maintained at or below 140 °F on a continuous basis.

(iv) The VA/A ratio in each of the four anaerobic basins shall be maintained at or below 0.5 on a continuous basis.

(A) The owner or operator shall measure the methanol concentration of the outfall of any basin (using NCASI Method DI/MEOH 94.03) when the VA/A ratio of that basin exceeds the following:

(*1*) 0.38, or

(*2*) The highest VA/A ratio at which the outfall of any basin has previously measured non-detect for methanol (using NCASI Method DI/MEOH 94.03).

(B) If the outfall of that basin measures detect for methanol, the owner or operator shall verify compliance with the emission standard specified in paragraph (b)(4) of this section by conducting a performance test pursuant to the requirements specified in paragraph (b)(8) of this section.

(v) The owner or operator may seek to establish or reestablish the parameter ranges, and/or the parameters required to be monitored as provided in paragraphs (b)(5)(i) through (v) of this section, by following the provisions of §63.453(n)(1) through (4).

(6) *Standards and monitoring requirements for each enclosure and closed-vent system.*

(i) The owner or operator shall comply with the design and operational requirements specified in paragraphs (b)(6)(ii) through (iv) of this section, and the monitoring requirements of paragraphs (b)(6)(v) through (x) of this section for each enclosure and closed-vent system used for collecting and routing of HAP emissions as specified in paragraph (b)(2) of this section.

(ii) Each enclosure shall be maintained at 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 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.

(iii) Each component of the closed-vent system that is operated at positive pressure 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).

(iv) Each bypass line in the closed-vent system that could divert vent streams containing HAPs to the atmosphere without meeting the routing requirements specified in paragraph (b)(2) of this section shall comply with either of the following requirements:

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

(B) 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 seal placed on the valve or closure mechanism in such a way that the valve or closure mechanism cannot be opened without breaking the seal.

(v) For each enclosure opening, the owner or operator shall perform, at least once every 30 days, a visual inspection of the closure mechanism specified in paragraph (b)(6)(ii) of this section to ensure the opening is maintained in the closed position and sealed.

(vi) For each closed-vent system required by paragraph (b)(2) of this section, the owner or operator shall perform a visual inspection 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.

(vii) For positive pressure closed-vent systems, or portions of closed-vent systems, the owner or operator shall demonstrate no detectable leaks as specified in paragraph (b)(6)(iii) of this section, measured initially and annually by the procedures in §63.457(d).

(viii) For each enclosure that is maintained at negative pressure, the owner or operator shall demonstrate initially and annually that it is maintained at negative pressure as specified in §63.457(e).

(ix) For each valve or closure mechanism as specified in paragraph (b)(6)(iv)(B) of this section, the owner or operator shall perform an inspection at least once every 30 days to ensure that the valve is maintained in the closed position and the emissions point gas stream is not diverted through the bypass line.

(x) If an inspection required by paragraph (b)(6) of this section identifies visible defects in ductwork, piping, enclosures, or connections to covers required by paragraph (b)(6) of this section, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if the enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as follows:

(A) 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.

(B) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.

(7) *Standards and monitoring requirements for the pulping process condensates closed collection system.* (i) The owner or operator shall comply with the design and operational requirements specified in paragraphs (b)(7)(ii) through (iii) of this section, and monitoring requirements of paragraph (b)(7)(iv) for the equipment systems in paragraph (b)(3) of this section used to route the pulping process condensates in a closed collection system.

(ii) Each closed collection system shall meet the individual drain system requirements specified in §§63.960, 63.961, and 63.962, except that the closed vent systems shall be designed and operated in accordance with paragraph (b)(6) of this section, instead of in accordance with §63.693 as specified in §63.692(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii); and

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

(A) The fixed roof and all openings (*e.g.*, access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements of paragraph (b)(6) of this section and routed in accordance with paragraph (b)(2) of this section; and

(B) 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 HAPs 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.

(iv) For each pulping process condensate closed collection system used to comply with paragraph (b)(3) of this section, the owner or operator shall perform a visual inspection every

30 days and shall comply with the inspection and monitoring requirements specified in §63.964 except for the closed-vent system and control device inspection and monitoring requirements specified in §63.964(a)(2).

(8) *Quarterly performance testing.* (i) The owner or operator shall, within 45 days after the beginning of each quarter, conduct a performance test.

(ii) The owner or operator shall use NCASI Method DI/HAPS–99.01 to collect a grab sample and determine the HAP concentration of the Raw Mill Effluent, Pulping Process Condensates, and Anaerobic Basin Discharge for the quarterly performance test conducted during the first quarter each year.

(iii) For each of the remaining three quarters, the owner or operator may use NCASI Method DI/MEOH 94.03 as a surrogate to collect and determine the HAP concentration of the Raw Mill Effluent, Pulping Process Condensates, and Anaerobic Basin Discharge.

(iv) The sample used to determine the HAP or Methanol concentration in the Raw Mill Effluent, Pulping Process Condensates, or Anaerobic Basin Discharge shall be a composite of four grab samples taken evenly spaced over an eight hour time period.

(v) The Raw Mill Effluent grab samples shall be taken from the raw mill effluent composite sampler.

(vi) The Pulping Process Condensates grab samples shall be taken from a line tap on the closed condensate collection system prior to discharge into the wastewater treatment plant.

(vii) The Anaerobic Basic Discharge grab samples shall be taken subsequent to the confluence of the four anaerobic basin discharges.

(viii) The flow rate of the Raw Mill Effluent, Pulping Process Condensates, and Anaerobic Basin Discharge, and the production rate of ODP shall be averaged over eight hours.

(ix) The data collected as specified in paragraphs (b)(5) and (b)(8) of this section shall be used to determine the HAP destruction efficiency of the wastewater treatment plant as specified in paragraph (b)(4)(ii) of this section.

(x) The HAP destruction efficiency shall be at least as great as that specified by paragraph (b)(4)(i) of this section.

(9) *Recordkeeping requirements.* (i) The owner or operator shall comply with the recordkeeping requirements as specified in Table 1 of subpart S of part 63 as it pertains to §63.10.

(ii) The owner or operator shall comply with the recordkeeping requirements as specified in

§63.454(b).

(iii) The owner or operator shall comply with the recordkeeping requirements as specified in §63.453(d).

(10) *Reporting requirements.* (i) Each owner or operator shall comply with the reporting requirements as specified in Table 1 of §63.10.

(ii) Each owner or operator shall comply with the reporting requirements as specified in §63.455(d).

(11) *Violations.* (i) Failure to comply with any applicable provision of this part shall constitute a violation.

(ii) Periods of excess emissions shall not constitute a violation provided the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed one percent. All periods of excess emission (including periods of startup, shutdown, and malfunction) shall be reported, and shall include:

(A) Failure to monitor a parameter, or maintain a parameter within minimum or maximum (as appropriate) ranges as specified in paragraph (b)(5), (b)(6), or (b)(7) of this section; and

(B) Failure to meet the HAP destruction efficiency standard specified in paragraph (b)(4) of this section.

(iii) Notwithstanding paragraph (b)(11)(ii) of this section, any excess emissions that present an imminent threat to public health or the environment, or may cause serious harm to public health or the environment, shall constitute a violation.

[66 FR 34124, June 27, 2001, as amended at 66 FR 52538, Oct. 16, 2001; 69 FR 19740, Apr. 13, 2004]

Table 1 to Subpart S of Part 63—General Provisions Applicability to Subpart S [a]

Reference	Applies to Subpart S	Comment
63.1(a)(1)-(3)	Yes	
63.1(a)(4)	Yes	Subpart S (this table) specifies applicability of each paragraph in subpart A to subpart S.
63.1(a)(5)	No	Section reserved.
63.1(a)(6)-(8)	Yes	
63.1(a)(9)	No	Section reserved.
63.1(a)(10)	No	Subpart S and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)-(14)	Yes	

63.1(b)(1)	No	Subpart S specifies its own applicability.
63.1(b)(2)-(3)	Yes	
63.1(c)(1)-(2)	Yes	
63.1(c)(3)	No	Section reserved.
63.1(c)(4)-(5)	Yes	
63.1(d)	No	Section reserved.
63.1(e)	Yes	
63.2	Yes	
63.3	Yes	
63.4(a)(1)	Yes	
63.4(a)(3)		
63.4(a)(4)	No	Section reserved.
63.4(a)(5)	Yes	
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Section reserved.
63.5(b)(3)	Yes	
63.5(b)(4)-(6)	Yes	
63.5(c)	No	Section reserved.
63.5(d)	Yes	
63.5(e)	Yes	
63.5(f)	Yes	
63.6(a)	Yes	
63.6(b)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(c)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(d)	No	Section reserved.
63.6(e)	Yes	
63.6(f)	Yes	
63.6(g)	Yes	
63.6(h)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(i)	Yes	
63.6(j)	Yes	
63.7	Yes	
63.8(a)(1)	Yes	
63.8(a)(2)	Yes	
63.8(a)(3)	No	Section reserved.
63.8(a)(4)	Yes	
63.8(b)(1)	Yes	
63.8(b)(2)	No	Subpart S specifies locations to conduct monitoring.
63.8(b)(3)	Yes	
63.8(c)(1)	Yes	
63.8(c)(2)	Yes	
63.8(c)(3)	Yes	
63.8(c)(4)	No	Subpart S allows site specific determination of monitoring frequency in § 63.453(n)(4).
63.8(c)(5)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.8(c)(6)	Yes	
63.8(c)(7)	Yes	

63.8(c)(8)	Yes	
63.8(d)	Yes	
63.8(e)	Yes	
63.8(f)(1)-(5)	Yes	
63.8(f)(6)	No	Subpart S does not specify relative accuracy test for CEMs.
63.8(g)	Yes	
63.9(a)	Yes	
63.9(b)	Yes	Initial notifications must be submitted within one year after the source becomes subject to the relevant standard.
63.9(c)	Yes	
63.9(d)	No	Special compliance requirements are only applicable to kraft mills.
63.9(e)	Yes	
63.9(f)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(1)	Yes	
63.9(g)(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(3)	No	Subpart S does not specify relative accuracy tests, therefore no notification is required for an alternative.
63.9(h)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)	Yes	
63.10(c)	Yes	
63.10(d)(1)	Yes	
63.10(d)(2)	Yes	
63.10(d)(3)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	
63.10(e)(1)	Yes	
63.10(e)(2)(i)	Yes	
63.10(e)(2)(ii)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(e)(3)	Yes	
63.10(e)(4)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(f)	Yes	
63.11-63.15	Yes	

---

a Wherever subpart A specifies ``postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17564, Apr. 12, 1999]

APPENDIX D

(40 CFR Part 63, Subpart KK)

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart KK—National Emission Standards for the Printing and Publishing Industry

Source: 61 FR 27140, May 30, 1996, unless otherwise noted.

§ 63.820 Applicability.

(a) The provisions of this subpart apply to:

(1) Each new and existing facility that is a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated, and

(2) each new and existing facility at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated for which the owner or operator chooses to commit to, and meets the criteria of paragraphs (a)(2)(i) and (a)(2)(ii) of this section for purposes of establishing the facility to be an area source with respect to this subpart:

(i) Use less than 9.1 Mg (10 tons) per each rolling 12-month period of each HAP at the facility, including materials used for source categories or purposes other than printing and publishing, and

(ii) Use less than 22.7 Mg (25 tons) per each rolling 12-month period of any combination of HAP at the facility, including materials used for source categories or purposes other than printing and publishing.

(3) Each facility for which the owner or operator chooses to commit to and meets the criteria stated in paragraph (a)(2) of this section shall be considered an area source, and is subject only to the provisions of §63.829(d) and §63.830(b)(1) of this subpart.

(4) Each facility for which the owner or operator commits to the conditions in paragraph (a)(2) of this section may exclude material used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining electric, propane, gasoline and diesel powered motor vehicles operated by the facility, and the use of HAP contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion).

(5) Each facility for which the owner or operator commits to the conditions in

paragraph (a)(2) of this section to become an area source, but subsequently exceeds either of the thresholds in paragraph (a)(2) of this section for any rolling 12-month period (without first obtaining and complying with other limits that keep its potential to emit HAP below major source levels), shall be considered in violation of its commitment for that 12-month period and shall be considered a major source of HAP beginning the first month after the end of the 12-month period in which either of the HAP-use thresholds was exceeded. As a major source of HAP, each such facility would be subject to the provisions of this subpart as noted in paragraph (a)(1) of this section and would no longer be eligible to use the provisions of paragraph (a)(2) of this section, even if in subsequent 12-month periods the facility uses less HAP than the thresholds in paragraph (a)(2) of this section.

(6) An owner or operator of an affected source subject to paragraph (a)(2) of this section who chooses to no longer be subject to paragraph (a)(2) of this section shall notify the Administrator of such change. If, by no longer being subject to paragraph (a)(2) of this section, the facility at which the affected source is located becomes a major source:

(i) The owner or operator of an existing source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for existing affected sources under this subpart;

(ii) The owner or operator of a new source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for new affected sources under this subpart.

(7) Nothing in this paragraph is intended to preclude a facility from establishing area source status by limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(b) This subpart does not apply to research or laboratory equipment.

§ 63.821 Designation of affected sources.

(a) The affected sources subject to this subpart are:

(1) All of the publication rotogravure presses and all affiliated equipment, including proof presses, cylinder and parts cleaners, ink and solvent mixing and storage equipment, and solvent recovery equipment at a facility.

(2) All of the product and packaging rotogravure or wide-web flexographic printing presses at a facility plus any other equipment at that facility which the owner or operator chooses to include in accordance with paragraph (a)(3) of this section,

except

(i) Proof presses, and

(ii) Any product and packaging rotogravure or wide-web flexographic press which is used primarily for coating, laminating, or other operations which the owner or operator chooses to exclude, provided that

(A) The sum of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using product and packaging rotogravure work stations and the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using wide-web flexographic print stations in each month never exceeds five weight-percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press in that month, including all inboard and outboard stations, and

(B) The owner or operator maintains records as required in §63.829(f).

(3) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source stand-alone coating equipment subject to the following provisions:

(i) Stand-alone coating equipment meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The stand-alone coating equipment and one or more product and packaging rotogravure or wide-web flexographic presses are used to apply solids-containing materials to the same web or substrate, or

(B) The stand-alone coating equipment and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material, or

(C) A common control device is used to control organic HAP emissions from the stand-alone coating equipment and from one or more product and packaging rotogravure or wide-web flexographic printing presses;

(ii) All eligible stand-alone coating equipment located at the facility is included in the affected source; and

(iii) No product and packaging rotogravure or wide-web flexographic presses are excluded from the affected source under the provisions of paragraph (a)(2)(ii) of this section.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with the criteria of paragraphs (b)(1) or (b)(2) on and after the applicable compliance date as specified in §63.826 of this subpart is subject only to the requirements of §63.829(e) and §63.830(b)(1) of this subpart.

(1) The owner or operator of the source applies no more than 500 kg per month, for every month, of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials on product and packaging rotogravure or wide-web flexographic printing presses, or

(2) The owner or operator of the source applies no more than 400 kg per month, for every month, of organic HAP on product and packaging rotogravure or wide-web flexographic printing presses.

(c) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with neither the criterion of paragraph (b)(1) nor (b)(2) of this section in any month after the applicable compliance date as specified in §63.826 of this subpart is, starting with that month, subject to all relevant requirements of this subpart and is no longer eligible to use the provisions of paragraph (b) of this section, even if in subsequent months the affected source does comply with the criteria of paragraphs (b)(1) or (b)(2) of this section.

§ 63.822 Definitions.

(a) All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A of this part.

Always-controlled work station means a work station associated with a dryer from which the exhaust is delivered to a control device, with no provision for the dryer exhaust to bypass the control device. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Capture efficiency means the fraction of all organic HAP emissions generated by a process that are delivered to a control device, expressed as a percentage.

Capture system means a hood, enclosed room, or other means of collecting organic HAP emissions into a closed-vent system that exhausts to a control device.

Car-seal means a seal that is placed on a device that is used to change the position of a valve or damper (e.g., from open to closed) in such a way that the position of the valve or damper cannot be changed without breaking the seal.

Certified product data sheet (CPDS) means documentation furnished by suppliers of inks, coatings, varnishes, adhesives, primers, solvents, and other materials or by an outside laboratory that provides the organic HAP content of these materials, by weight, measured using Method 311 of appendix A of this part 63 or an equivalent or alternative method (or formulation data as provided in §63.827(b)) and the solids content of these materials, by weight, determined in accordance with §63.827(c). The purpose of the CPDS is to assist the owner or operator in demonstrating compliance with the emission limitations presented in §§63.824–63.825.

Coating operation means the application of a uniform layer of material across the entire width of a substrate.

Coating station means a work station on which a coating operation is conducted.

Control device means a device such as a carbon adsorber or oxidizer which reduces the organic HAP in an exhaust gas by recovery or by destruction.

Control device efficiency means the ratio of organic HAP emissions recovered or destroyed by a control device to the total HAP emissions that are introduced into the control device, expressed as a percentage.

Day means a 24-consecutive-hour period.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Flexographic press means an unwind or feed section, a series of individual work stations, one or more of which is a flexographic print station, any dryers (including interstage dryers and overhead tunnel dryers) associated with the work stations, and a rewind, stack, or collection station. The work stations may be oriented vertically, horizontally, or around the circumference of a single large impression cylinder. Inboard and outboard work stations, including those employing any other technology, such as rotogravure, are included if they are capable of printing or coating on the same substrate.

Flexographic print station means a work station on which a flexographic printing operation is conducted. A flexographic print station includes a flexographic printing plate which is an image carrier made of rubber or other elastomeric material. The image (type and art) to be printed is raised above the printing plate.

HAP applied means the organic HAP content of all inks, coatings, varnishes, adhesives, primers, solvent, and other materials applied to a substrate by a product and packaging rotogravure or wide-web flexographic printing affected source.

HAP used means the organic HAP applied by a publication rotogravure printing affected source, including all organic HAP used for cleaning, parts washing, proof presses, and all organic HAP emitted during tank loading, ink mixing, and storage.

Intermittently-controllable work station means a work station associated with a dryer with provisions for the dryer exhaust to be delivered to or diverted from a control device depending on the position of a valve or damper. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Month means a calendar month or a prespecified period of 28 days to 35 days.

Never-controlled work station means a work station which is not equipped with provisions by which any emissions, including those in the exhaust from any associated dryer, may be delivered to a control device.

Overall Organic HAP control efficiency means the total efficiency of a control system, determined either by:

(1) The product of the capture efficiency and the control device efficiency or

(2) A liquid-liquid material balance.

Print station means a work station on which a printing operation is conducted.

Printing operation means the formation of words, designs, and pictures on a substrate other than fabric through the application of material to that substrate.

Product and packaging rotogravure printing means the production, on a rotogravure press, of any printed substrate not otherwise defined as publication rotogravure printing. This includes, but is not limited to, folding cartons, flexible packaging, labels and wrappers, gift wraps, wall and floor coverings, upholstery, decorative laminates, and tissue products.

Proof press means any device used only to check the quality of the image formation of rotogravure cylinders or flexographic plates, which prints only non-saleable items.

Publication rotogravure printing means the production, on a rotogravure press, of the following saleable paper products:

(1) Catalogues, including mail order and premium,

(2) Direct mail advertisements, including circulars, letters, pamphlets, cards, and printed envelopes,

(3) Display advertisements, including general posters, outdoor advertisements, car

cards, window posters; counter and floor displays; point of purchase and other printed display material,

(4) Magazines,

(5) Miscellaneous advertisements, including brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, and shopping news,

(6) Newspapers, magazine and comic supplements for newspapers, and preprinted newspaper inserts, including hi-fi and spectacolor rolls and sections,

(7) Periodicals, and

(8) Telephone and other directories, including business reference services.

Research or laboratory equipment means any equipment for which the primary purpose is to conduct research and development into new processes and products, where such equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

Rotogravure press means an unwind or feed section, a series of one or more work stations, one or more of which is a rotogravure print station, any dryers associated with the work stations, and a rewind, stack, or collection section. Inboard and outboard work stations including those employing any other technology, such as flexography, are included if they are capable of printing or coating on the same substrate.

Rotogravure print station means a work station on which a rotogravure printing operation is conducted. A rotogravure print station includes a rotogravure cylinder and ink supply. The image (type and art) to be printed is etched or engraved below the surface of the rotogravure cylinder. On a rotogravure cylinder the printing image consists of millions of minute cells.

Stand-alone coating equipment means an unwind or feed section, a series of one or more coating stations and any associated dryers, and a rewind, stack or collection section that:

Is not part of a product and packaging rotogravure or wide-web flexographic press, and

Is used to conduct one or more coating operations on a substrate. Stand-alone coating equipment

May or may not process substrate that is also processed by a product and packaging rotogravure or wide-web flexographic press, apply solids-containing materials that are also applied by a product and packaging rotogravure or wide-web flexographic press, and utilize a control device that is also utilized by a product and packaging rotogravure or wide-web flexographic press. Stand-alone coating equipment is sometimes referred to as “off-line” coating equipment.

Wide-web flexographic press means a flexographic press capable of printing substrates greater than 18 inches in width.

Work station means a unit on a rotogravure or wide-web flexographic press where material is deposited onto a substrate.

(b) The symbols used in equations in this subpart are defined as follows:

(1) C_{ahi}=the monthly average, as-applied, organic HAP content of solids-containing material, i, expressed as a weight-fraction, kg/kg.

(2) C_{asi}=the monthly average, as applied, solids content, of solids-containing material, i, expressed as a weight-fraction, kg/kg.

(3) C_{hi}=the organic HAP content of ink or other solids-containing material, i, expressed as a weight-fraction, kg/kg.

(4) C_{hij}=the organic HAP content of solvent j, added to solids-containing material i, expressed as a weight-fraction, kg/kg.

(5) C_{hj}=the organic HAP content of solvent j, expressed as a weight-fraction, kg/kg.

(6) C_i=the organic volatile matter concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 25 or Method 25A.

(7) C_{si}=the solids content of ink or other material, i, expressed as a weight-fraction, kg/kg.

(8) C_{vi}=the volatile matter content of ink or other material, i, expressed as a weight-fraction, kg/kg.

(9) E=the organic volatile matter control efficiency of the control device, percent.

(10) F=the organic volatile matter capture efficiency of the capture system, percent.

(11) G_i=the mass fraction of each solids containing material, i, which was applied at 20 weight-percent or greater solids content, on an as-applied basis, kg/kg.

(12) H=the total monthly organic HAP applied, kg.

(13) H_a=the monthly allowable organic HAP emissions, kg.

(14) H_L=the monthly average, as-applied, organic HAP content of all solids-containing materials applied at less than 0.04 kg organic HAP per kg of material applied, kg/kg.

(15) H_s=the monthly average, as-applied, organic HAP to solids ratio, kg organic HAP/kg solids applied.

(16) H_{si}=the as-applied, organic HAP to solids ratio of material i.

(17) L=the mass organic HAP emission rate per mass of solids applied, kg/kg.

(18) M_{Bi}=the sum of the mass of solids-containing material, i, applied on intermittently-controllable work stations operating in bypass mode and the mass of solids-containing material, i, applied on never-controlled work stations, in a month, kg.

(19) M_{Bj}=the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in bypass mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on never-controlled work stations, in a month, kg.

(20) M_{ci}=the sum of the mass of solids-containing material, i, applied on intermittently-controllable work stations operating in controlled mode and the mass of solids-containing material, i, applied on always-controlled work stations, in a month, kg.

(21) M_{cj}=the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in controlled mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on always-controlled work stations in a month, kg.

(22) M_f=the total organic volatile matter mass flow rate, kg/h.

(23) M_{fi}=the organic volatile matter mass flow rate at the inlet to the control device, kg/h.

(24) M_{fo}=the organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(25) M_{hu}=the mass of organic HAP used in a month, kg.

(26) M_i=the mass of ink or other material, i, applied in a month, kg.

(27) M_{ij}=the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing material, i, in a month, kg.

(28) M_j=the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied in a month, kg.

(29) M_{Lj}=the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, in a month, kg.

(30) M_{vr}=the mass of volatile matter recovered in a month, kg.

(31) M_{vu}=the mass of volatile matter, including water, used in a month, kg.

(32) MW_i=the molecular weight of compound i in the vent gas, kg/kg-mol.

(33) n=the number of organic compounds in the vent gas.

(34) p=the number of different inks, coatings, varnishes, adhesives, primers, and other materials applied in a month.

(35) q=the number of different solvents, thinners, reducers, diluents, or other non-solids-containing materials applied in a month.

(36) Q_{sd}=the volumetric flow rate of gases entering or exiting the control device, as determined by Method 2, dscm/h.

(37) R=the overall organic HAP control efficiency, percent.

(38) R_e=the overall effective organic HAP control efficiency for publication rotogravure, percent.

(39) R_v=the organic volatile matter collection and recovery efficiency, percent.

(40) S=the mass organic HAP emission rate per mass of material applied, kg/kg.

(41) 0.0416=conversion factor for molar volume, kg-mol/m^3(@ 293 K and 760 mmHg).

§ 63.823 Standards: General.

Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to this subpart KK.

§ 63.824 Standards: Publication rotogravure printing.

(a) Each owner or operator of any publication rotogravure printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in §63.826 of this subpart.

(b) Each publication rotogravure affected source shall limit emissions of organic HAP to no more than eight percent of the total volatile matter used each month. The emission limitation may be achieved by overall control of at least 92 percent of organic HAP used, by substitution of non-HAP materials for organic HAP, or by a combination of capture and control technologies and substitution of materials. To demonstrate compliance, each owner or operator shall follow the procedure in paragraph (b)(1) of this section when emissions from the affected source are controlled by a solvent recovery device, the procedure in paragraph (b)(2) of this section when emissions from the affected source are controlled by an oxidizer, and the procedure in paragraph (b)(3) of this section when no control device is used.

(1) Each owner or operator using a solvent recovery device to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedures in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

(i) Perform a liquid-liquid material balance for each month as follows:

(A) Measure the mass of each ink, coating, varnish adhesive, primer, solvent, and other material used by the affected source during the month.

(B) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent and other material used by the affected source during the month following the procedure in §63.827(b)(1).

(C) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month following the procedure in §63.827(c)(1).

(D) Install, calibrate, maintain and operate, according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(E) Measure the amount of volatile matter recovered for the month.

(F) Calculate the overall effective organic HAP control efficiency (R_e) for the month using Equation 1:

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(M_{vr})(M_{hu} / M_{vu})\right]}{M_{vu}} \qquad Eq\ 1$$

For the purposes of this calculation, the mass fraction of organic HAP present in the recovered volatile matter is assumed to be equal to the mass fraction of organic HAP present in the volatile matter used.

(G) The affected source is in compliance for the month, if R_e is at least 92 percent each month.

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency as specified in paragraphs (b)(1)(ii)(A) through (b)(1)(ii)(E) of this section:

(A) Install continuous emission monitors to determine the total organic volatile matter mass flow rate (e.g., by determining the concentration of the vent gas in grams per cubic meter, and the volumetric flow rate in cubic meters per second, such that the total organic volatile matter mass flow rate in grams per second can be calculated and summed) at both the inlet to and the outlet from the control device, such that the percent control efficiency (E) of the control device can be calculated for each month.

(B) Determine the percent capture efficiency (F) of the capture system according to §63.827(e).

(C) Calculate the overall effective organic HAP control efficiency (R_e) achieved for each month using Equation 2.

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(E/100)(F/100)M_{hu}\right]}{M_{vu}} \qquad Eq\ 2$$

(D) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with §63.828(a)(5) whenever a publication rotogravure printing press is operated.

(E) The affected source is in compliance with the requirement for the month if R_e is at least 92 percent, and the capture device is operated at an average value greater than, or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three-hour period.

(2) Each owner or operator using an oxidizer to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedure in either paragraph (b)(2)(i) or (b)(2)(ii) of this section:

(i) Demonstrate initial compliance through performance tests and continuing compliance through continuous monitoring as follows:

(A) Determine the oxidizer destruction efficiency (E) using the procedure in §63.827(d).

(B) Determine the capture efficiency (F) using the procedure in §63.827(e).

(C) [Reserved]

(D) Calculate the overall effective organic HAP control efficiency (R_e) achieved using Equation 2.

(E) The affected source is in initial compliance if R_e is at least 92 percent. Demonstration of continuing compliance is achieved by continuous monitoring of an appropriate oxidizer operating parameter in accordance with §63.828(a)(4), and by continuous monitoring of an appropriate capture system monitoring parameter in accordance with §63.828(a)(5). The affected source is in continuing compliance if the capture device is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5), and

(*1*) if an oxidizer other than a catalytic oxidizer is used, the average combustion temperature for all three-hour periods is greater than or equal to the average combustion temperature established under §63.827(d), or

(*2*) if a catalytic oxidizer is used, the average catalyst bed inlet temperature for all three-hour periods is greater than or equal to the average catalyst bed inlet temperature established in accordance with §63.827(d).

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency in accordance with the requirements of paragraph (b)(1)(ii) of this section.

(3) To demonstrate compliance without the use of a control device, each owner or operator shall compare the mass of organic HAP used to the mass of volatile matter used each month, as specified in paragraphs (b)(3)(i) through (b)(3)(iv) of this section:

(i) Measure the mass of each ink, coating, varnish adhesive, primer, solvent, and other material used in the affected source during the month,

(ii) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in §63.827(b)(1), and

(iii) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in §63.827(c)(1).

(iv) The affected source is in compliance for the month if the mass of organic HAP used does not exceed eight percent of the mass of volatile matter used.

§ 63.825 Standards: Product and packaging rotogravure and wide-web flexographic printing.

(a) Each owner or operator of any product and packaging rotogravure or wide-web flexographic printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in §63.826 of this subpart.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source shall limit emissions to no more than five percent of the organic HAP applied for the month; or to no more than four percent of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month; or to no more than 20 percent of the mass of solids applied for the month; or to a calculated equivalent allowable mass based on the organic HAP and solids contents of the inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month. The owner or operator of each product and packaging rotogravure or wide-web flexographic printing affected source shall demonstrate compliance with this standard by following one of the procedures in paragraphs (b)(1) through (b)(10) of this section:

(1) Demonstrate that each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied during the month contains no more than 0.04 weight-fraction organic HAP, on an as-purchased basis, as determined in accordance with §63.827(b)(2).

(2) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied during the month contains no more than 0.04 weight-fraction organic HAP, on a monthly average as-applied basis as determined in accordance with paragraphs (b)(2)(i)–(ii) of this section. The owner or operator shall calculate the as-applied HAP content of materials which are reduced, thinned,

or diluted prior to application, as follows:

(i) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied on an as-purchased basis in accordance with §63.827(b)(2).

(ii) Calculate the monthly average as-applied organic HAP content, C_{ahi} of each ink, coating, varnish, adhesive, primer, and other solids-containing material using Equation 3.

$$C_{ahi} = \frac{\left(C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad Eq\ 3$$

(3)(i) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied, either

(A) Contains no more than 0.04 weight-fraction organic HAP on a monthly average as-applied basis, or

(B) Contains no more than 0.20 kg of organic HAP per kg of solids applied, on a monthly average as-applied basis.

(ii) The owner or operator may demonstrate compliance in accordance with paragraphs (b)(3)(ii) (A)–(C) of this section.

(A) Use the procedures of paragraph (b)(2) of this section to determine which materials meet the requirements of paragraph (b)(3)(i)(A) of this section,

(B) Determine the as-applied solids content following the procedure in §63.827(c)(2) of all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section. The owner or operator may calculate the monthly average as-applied solids content of materials which are reduced, thinned, or diluted prior to application, using Equation 4, and

$$C_{asi} = \frac{C_{si} M_i}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad Eq\ 4$$

(C) Calculate the as-applied organic HAP to solids ratio, H_{si}, for all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section, using Equation 5.

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \qquad Eq\ 5$$

(4) Demonstrate that the monthly average as-applied organic HAP content, H_L, of all materials applied is less than 0.04 kg HAP per kg of material applied, as determined by Equation 6.

$$H_L = \frac{\sum_{i-1}^{p} M_i C_{hi} + \sum_{j-1}^{q} M_j C_{hj}}{\sum_{i-1}^{p} M_i + \sum_{j-1}^{q} M_j} \qquad Eq\ 6$$

(5) Demonstrate that the monthly average as-applied organic HAP content on the basis of solids applied, H_s, is less than 0.20 kg HAP per kg solids applied as determined by Equation 7.

$$H_S = \frac{\sum_{i-1}^{p} M_i C_{hi} + \sum_{j-1}^{q} M_j C_{hj}}{\sum_{i-1}^{p} M_i C_{si}} \qquad Eq\ 7$$

(6) Demonstrate that the total monthly organic HAP applied, H, as determined by Equation 8, is less than the calculated equivalent allowable organic HAP, H_a, as determined by paragraph (e) of this section.

$$H = \sum_{i-1}^{p} M_i C_{hi} + \sum_{j-1}^{q} M_j C_{hj} \qquad Eq\ 8$$

(7) Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent for each month. If the affected source operates more than one capture system or more than one control device, and has only always-controlled work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of either paragraph (f) or (h) of this section. If the affected source operates one or more never-controlled work stations or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance in accordance with the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(8) Operate a capture system and control device and limit the organic HAP

emission rate to no more than 0.20 kg organic HAP emitted per kg solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(9) Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg material applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(10) Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with paragraph (e) of this section. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(c) To demonstrate compliance with the overall organic HAP control efficiency requirement in §63.825(b)(7) or the organic HAP emissions limitation requirements in §63.825(b)(8)–(10), each owner or operator using a solvent recovery device to control emissions shall show compliance by following the procedures in either paragraph (c)(1) or (c)(2) of this section:

(1) Perform a liquid-liquid material balance for each and every month as follows:

(i) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent and other material applied on the press or group of presses controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(iii) Determine the volatile matter content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(v) Install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(vi) Measure the amount of volatile matter recovered for the month.

(vii) Calculate the volatile matter collection and recovery efficiency, R_v, using Equation 9.

$$R_v = 100 \frac{M_{vr}}{\sum_{i=1}^{p} M_i C_{vi} + \sum_{j=1}^{q} M_j} \qquad Eq\ 9$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, using Equation 10.

$$H = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p}\left(C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij}\right)\right] \qquad Eq\ 10$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, using Equation 11.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si} M_i} \qquad Eq\ 11$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 12.

$$S = \frac{H}{\sum_{i=1}^{p} \left[M_i + \sum_{j=1}^{q} M_{ij} \right]} \qquad Eq\ 12$$

(xi) The affected source is in compliance if

(A) The organic volatile matter collection and recovery efficiency, R_v, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) the organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) the organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency following the procedures in paragraphs (c)(2)(i) through (c)(2)(xi) of this section:

(i) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied, or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common control device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(iii) Install continuous emission monitors to determine the total organic volatile matter mass flow rate (e.g., by determining the concentration of the vent gas in grams per cubic meter, and the volumetric flow rate in cubic meters per second, such that the total organic volatile matter mass flow rate in grams per second can be calculated and summed) at both the inlet to and the outlet from the control device, such that the percent control efficiency (E) of the control device can be calculated for each month.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(v) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with §63.828(a)(5) whenever a product and packaging rotogravure or wide-web flexographic printing press is operated.

(vi) Determine the capture efficiency (F) in accordance with §63.827(e)–(f).

(vii) Calculate the overall organic HAP control efficiency, (R), achieved for each month using Equation 13.

$$R = \frac{EF}{100} \qquad Eq\ 13$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.

$$H = \left[1 - \left(\frac{E}{100}\frac{F}{100}\right)\right]\left[\sum_{i=1}^{p}\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)\right] \qquad Eq\ 14$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, using Equation 15.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si}M_i} \qquad Eq\ 15$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.

$$S = \frac{H}{\sum_{i=1}^{p}\left[M_i + \sum_{j=1}^{q} M_{ij}\right]} \qquad Eq\ 16$$

(xi) The affected source is in compliance if the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three hour period, and

(A) The organic volatile matter collection and recovery efficiency, R_v, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(d) To demonstrate compliance with the overall organic HAP control efficiency requirement in §63.825(b)(7) or the overall organic HAP emission rate limitation requirements in §63.825(b)(8)–(10), each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) of this section:

(1) demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters following the procedures in paragraph (d)(1)(i) through (d)(1)(xi) of this section:

(i) Determine the oxidizer destruction efficiency (E) using the procedure in §63.827(d).

(ii) Determine the capture system capture efficiency (F) in accordance with §63.827(e)–(f).

(iii) Calculate the overall organic HAP control efficiency, (R), achieved using Equation 13.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common solvent recovery device during the month.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(vii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, for each month using Equation 15.

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.

(x) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with §63.828(a)(4)–(5) whenever a product and packaging rotogravure or wide-web flexographic press is operating.

(xi) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with §63.828(a)(4) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three hour period, and

(A) The overall organic HAP control efficiency, R, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic

HAP per kg solids applied or less, or

(C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency. Compliance shall be demonstrated in accordance with the requirements of paragraph (c)(2) of this section.

(e) Owners or operators may calculate the monthly allowable HAP emissions, H_a, for demonstrating compliance in accordance with paragraph (b)(6), (c)(1)(xi)(D), (c)(2)(xi)(D), or (d)(1)(xi)(D) of this section as follows:

(1) Determine the as-purchased mass of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, M_i.

(2) Determine the as-purchased solids content of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, in accordance with §63.827(c)(2), C_{si}.

(3) Determine the as-purchased mass fraction of each ink, coating, varnish, adhesive, primer, and other solids-containing material which was applied at 20 weight-percent or greater solids content, on an as-applied basis, G_i.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, each month, M_{Lj}.

(5) Calculate the monthly allowable HAP emissions, H_a, using Equation 17.

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i (1 - G_i) + \sum_{j=1}^{q} M_{Lj}\right] \qquad Eq\ 17$$

(f) Owners or operators of product and packaging rotogravure or wide-web flexographic printing presses shall demonstrate compliance according to the procedures in paragraphs (f)(1) through (f)(7) of this section if the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations.

(1) The owner or operator of each solvent recovery system used to control one or

more product and packaging rotogravure or wide-web flexographic presses for which the owner or operator chooses to comply by means of a liquid-liquid mass balance shall determine the organic HAP emissions for those presses controlled by that solvent recovery system either

(i) in accordance with paragraphs (c)(1)(i)–(iii) and (c)(1)(v)–(viii) of this section if the presses controlled by that solvent recovery system have only always-controlled work stations, or

(ii) in accordance with paragraphs (c)(1)(ii)–(iii), (c)(1)(v)–(vi), and (g) of this section if the presses controlled by that solvent recovery system have one or more never-controlled or intermittently-controllable work stations.

(2) The owner or operator of each solvent recovery system used to control one or more product and packaging rotogravure or wide-web flexographic presses, for which the owner or operator chooses to comply by means of an initial test of capture efficiency, continuous emission monitoring of the control device, and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that solvent recovery system, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture system efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that solvent recovery system either

(A) In accordance with paragraphs (c)(2)(i)–(iii) and (c)(2)(v)–(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)–(iii), (c)(2)(v)–(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(3) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters, shall

(i) Monitor an operating parameter established in accordance with §63.828(a)(4) to assure control device efficiency, and

(ii) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture efficiency, and

(iii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (d)(1)(i)–(v) and (d)(1)(vii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (d)(1)(i)–(iii), (d)(1)(v), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(4) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate compliance through an initial capture efficiency test, continuous emission monitoring of the control device and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (c)(2)(i)–(iii) and (c)(2)(v)–(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)–(iii), (c)(2)(v)–(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(5) The owner or operator of one or more uncontrolled product and packaging rotogravure or wide-web flexographic printing presses shall determine the organic HAP applied on those presses using Equation 8. The organic HAP emitted from an uncontrolled press is equal to the organic HAP applied on that press.

(6) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, the owner or operator shall determine the solids content of each ink, coating, varnish, adhesive, primer, solvent and other material applied during the month following the procedure in §63.827(c)(2).

(7) The owner or operator shall determine the organic HAP emissions for the

affected source for the month by summing all organic HAP emissions calculated according to paragraphs (f)(1), (f)(2)(ii), (f)(3)(iii), (f)(4)(ii), and (f)(5) of this section. The affected source is in compliance for the month, if all operating parameters required to be monitored under paragraphs (f)(2)–(4) of this section were maintained at the appropriate values, and

(i) The total mass of organic HAP emitted by the affected source was not more than four percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, diluents, reducers, thinners and other materials applied by the affected source, or

(ii) The total mass of organic HAP emitted by the affected source was not more than 20 percent of the total mass of solids applied by the affected source, or

(iii) The total mass of organic HAP emitted by the affected source was not more than the equivalent allowable organic HAP emissions for the affected source, H_a, calculated in accordance with paragraph (e) of this section, or

(iv) The total mass of organic HAP emitted by the affected source was not more than five percent of the total mass of organic HAP applied by the affected source. The total mass of organic HAP applied by the affected source in the month shall be determined by the owner or operator using Equation 8.

(g) Owners or operators determining organic HAP emissions from a press or group of presses having one or more never-controlled or intermittently-controllable work stations and using the procedures specified in paragraphs (f)(1)(ii), (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section shall for that press or group of presses:

(1) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in bypass mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on never-controlled work stations during the month, M_{Bi}.

(2) Determine the sum of the mass of all solvents, reducers, thinners, and other diluents which are applied on intermittently-controllable work stations in bypass mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on never-controlled work stations during the month, M_{Bj}.

(3) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in controlled mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on always-controlled work stations during the month, M_{Bj}.

(4) Determine the sum of the mass of all solvents, reducers, thinners, and other

diluents which are applied on intermittently-controllable work stations in controlled mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on always-controlled work stations during the month, M_{Cj}.

(5) For each press or group of presses for which the owner or operator uses the provisions of paragraph (f)(1)(ii) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation 18.

$$H = \left[\sum_{i=1}^{p} M_{Ci} C_{hi} + \sum_{j=1}^{q} M_{Cj} C_{hj}\right]\left[1 - \frac{M_{vr}}{\sum_{i=1}^{p} M_{Ci} C_{vi} + \sum_{j=1}^{q} M_{Cj}}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{hi} + \sum_{j=1}^{q} M_{Bj} C_{hj}\right] \qquad Eq\ 18$$

(6) For each press or group of presses for which the owner or operator uses the provisions of paragraphs (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation (19).

$$H = \left[\sum_{i=1}^{p} M_{Ci} C_{hi} + \sum_{j=1}^{q} M_{Cj} C_{hj}\right]\left[1 - \left(\frac{E}{100}\,\frac{F}{100}\right)\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{hi} + \sum_{j=1}^{q} M_{Bj} C_{hj}\right] \qquad Eq\ 19$$

(h) If the affected source operates more than one capture system or more than one control device, and has no never-controlled work stations and no intermittently-controllable work stations, then the affected source is in compliance with the 95 percent overall organic HAP control efficiency requirement for the month if for each press or group of presses controlled by a common control device:

(1) The volatile matter collection and recovery efficiency, R_v, as determined by paragraphs (c)(1)(i), (c)(1)(iii), and (c)(1)(v)–(vii) of this section is equal to or greater than 95 percent, or

(2) The overall organic HAP control efficiency as determined by paragraphs (c)(2)(iii) and (c)(2)(v)–(vii) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with §63.828(a)(5) for each three hour period, or

(3) The overall organic HAP control efficiency as determined by paragraphs (d)(1)(i)–(iii) and (d)(1)(x) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent, the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with

§63.828(a)(4) for each three hour period, and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with §63.828(a)(5) for each three hour period.

§ 63.826 Compliance dates.

(a) The compliance date for an owner or operator of an existing affected source subject to the provisions of this subpart is May 30, 1999.

(b) The compliance date for an owner or operator of a new affected source subject to the provisions of this subpart is immediately upon start-up of the affected source, or May 30, 1996, whichever is later.

(c) Affected sources which have undergone reconstruction are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the affected source has been reconstructed. Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs.

§ 63.827 Performance test methods.

(a) An owner or operator using a control device to comply with the requirements of §§63.824–63.825 is not required to conduct an initial performance test to demonstrate compliance if one or more of the criteria in paragraphs (a)(1) through (a)(3) of this section are met:

(1) A control device that is in operation prior to May 30, 1996, does not need to be tested if

(i) It is equipped with continuous emission monitors for determining inlet and outlet total organic volatile matter concentration, and capture efficiency has been determined in accordance with the requirements of this subpart, such that an overall HAP control efficiency can be calculated, and

(ii) The continuous emission monitors are used to demonstrate continuous compliance in accordance with §63.828, or

(2) The owner or operator has met the requirements of either §63.7(e)(2)(iv) or §63.7(h), or

(3) The control device is a solvent recovery system and the owner or operator chooses to comply by means of a monthly liquid-liquid material balance.

(b) Determination of the organic HAP content of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials for the purpose of meeting the requirements of §63.824 shall be conducted according to paragraph (b)(1) of this section. Determination of the organic HAP content of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials for the purpose of meeting the requirements of §63.825 shall be conducted according to paragraph (b)(2) of this section.

(1) Each owner or operator of a publication rotogravure facility shall determine the organic HAP weight-fraction of each ink, coating, varnish, adhesive, primer, solvent, and other material used in a publication rotogravure affected source by following one of the procedures in paragraphs (b)(1)(i) through (b)(1)(iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part 63. The Method 311 determination may be performed by the manufacturer of the material and the results provided to the owner or operator. If these values cannot be determined using Method 311, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator. The recovery efficiency of the technique must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(ii) The owner or operator may determine the volatile matter content of the material in accordance with §63.827(c)(1) and use this value for the organic HAP content for all compliance purposes.

(iii) The owner or operator may, except as noted in paragraph (b)(1)(iv) of this section, rely on formulation data provided by the manufacturer of the material on a CPDS if

(A) The manufacturer has included in the organic HAP content determination all HAP present at a level greater than 0.1 percent in any raw material used, weighted by the mass fraction of each raw material used in the material, and

(B) The manufacturer has determined the HAP content of each raw material present in the formulation by Method 311 of appendix A of this part 63, or by an alternate method approved by the Administrator, or by reliance on a CPDS from a raw material supplier prepared in accordance with §63.827(b)(1)(iii)(A).

(iv) In the event of any inconsistency between the Method 311 of appendix A of this part 63 test data and formulation data, that is, if the Method 311 test value is higher, the Method 311 test data shall govern, unless after consultation, an owner or operator demonstrates to the satisfaction of the enforcement authority that the formulation data are correct.

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing facility shall determine the organic HAP weight fraction of each ink, coating, varnish, adhesive, primer, solvent, thinner, reducer, diluent, and other material applied by following one of the procedures in paragraphs (b)(2)(i) through (b)(2)(iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part 63. The Method 311 determination may be performed by the manufacturer of the material and the results provided to the owner or operator. If these values cannot be determined using Method 311, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator. The recovery efficiency of the technique must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(ii) The owner or operator may determine the volatile matter content of the material in accordance with §63.827(c)(2) and use this value for the organic HAP content for all compliance purposes.

(iii) The owner or operator may, except as noted in paragraph (b)(2)(iv) of this section, rely on formulation data provided by the manufacturer of the material on a CPDS if

(A) The manufacturer has included in the organic HAP content determination, all organic HAP present at a level greater than 0.1 percent in any raw material used, weighted by the mass fraction of each raw material used in the material, and

(B) The manufacturer has determined the organic HAP content of each raw material present in the formulation by Method 311 of appendix A of this part 63, or, by an alternate method approved by the Administrator, or, by reliance on a CPDS from a raw material supplier prepared in accordance with §63.827(b)(2)(iii)(A).

(iv) In the event of any inconsistency between the Method 311 of appendix A of this part 63 test data and a facility's formulation data, that is, if the Method 311 test value is higher, the Method 311 test data shall govern, unless after consultation, an owner or operator demonstrates to the satisfaction of the enforcement authority that the formulation data are correct.

(c) Determination by the owner or operator of the volatile matter content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials used for the purpose of meeting the requirements of §63.824 shall be conducted according to paragraph (c)(1) of this section. Determination by the owner or operator of the volatile matter and solids content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials applied for the purpose of meeting the requirements of §63.825 shall be conducted according to paragraph (c)(2) of this section.

(1) Each owner or operator of a publication rotogravure facility shall determine the volatile matter weight-fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material used using Method 24A of 40 CFR part 60, appendix A. The Method 24A determination may be performed by the manufacturer of the material and the results provided to the owner or operator. If these values cannot be determined using Method 24A, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator. The owner or operator may rely on formulation data, subject to the provisions of paragraph (c)(3) of this section.

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing facility shall determine the volatile matter and solids weight-fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material applied using Method 24 of 40 CFR part 60, appendix A. The Method 24 determination may be performed by the manufacturer of the material and the results provided to the owner or operator. If these values cannot be determined using Method 24, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator. The owner or operator may rely on formulation data, subject to the provisions of paragraph (c)(3) of this section.

(3) Owners or operators may determine the volatile matter content of materials based on formulation data, and may rely on volatile matter content data provided by material suppliers. In the event of any inconsistency between the formulation data and the results of Test Methods 24 or 24A of 40 CFR part 60, appendix A, the applicable test method shall govern, unless after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(d) A performance test of a control device to determine destruction efficiency for the purpose of meeting the requirements of §§63.824–63.825 shall be conducted by the owner or operator in accordance with the following:

(1) An initial performance test to establish the destruction efficiency of an oxidizer and the associated combustion zone temperature for a thermal oxidizer and the associated catalyst bed inlet temperature for a catalytic oxidizer shall be conducted and the data reduced in accordance with the following reference methods and procedures:

(i) Method 1 or 1A of 40 CFR part 60, appendix A is used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A is used to determine gas volumetric flow rate.

(iii) Method 3 of 40 CFR part 60, appendix A is used for gas analysis to determine dry molecular weight.

(iv) Method 4 of 40 CFR part 60, appendix A is used to determine stack gas moisture.

(v) Methods 2, 2A, 3, and 4 of 40 CFR part 60, appendix A shall be performed, as applicable, at least twice during each test period.

(vi) Method 25 of 40 CFR part 60, Appendix A, shall be used to determine organic volatile matter concentration, except as provided in paragraphs (d)(1)(vi)(A)–(C) of this section. The owner or operator shall submit notice of the intended test method to the Administrator for approval along with notice of the performance test required under §63.7(c). The owner or operator may use Method 25A of 40 CFR part 60, appendix A, if

(A) An exhaust gas organic volatile matter concentration of 50 parts per million by volume (ppmv) or less is required to comply with the standards of §§63.824–63.825, or

(B) The organic volatile matter concentration at the inlet to the control system and the required level of control are such to result in exhaust gas organic volatile matter concentrations of 50 ppmv or less, or

(C) Because of the high efficiency of the control device, the anticipated organic volatile matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.

(vii) Each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining organic volatile matter concentrations and mass flow rates, the average of results of all runs shall apply.

(viii) Organic volatile matter mass flow rates shall be determined using Equation 20:

$$M_f = Q_{sd}\left[\sum_{i=1}^{n} C_i MW_i\right][0.0416]\left[10^{-6}\right] \qquad Eq\ 20$$

(ix) Emission control device efficiency shall be determined using Equation 21:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \qquad Eq\ 21$$

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) For the purpose of determining the value of the oxidizer operating parameter that will demonstrate continuing compliance, the time-weighted average of the values recorded during the performance test shall be computed. For an oxidizer other than catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum combustion temperature. For a catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum gas temperature upstream of the catalyst bed. These minimum temperatures are the operating parameter values that demonstrate continuing compliance with the requirements of §§63.824–63.825.

(e) A performance test to determine the capture efficiency of each capture system venting organic emissions to a control device for the purpose of meeting the requirements of §§63.824(b)(1)(ii), 63.824(b)(2), 63.825(c)(2), 63.825(d)(1)–(2), 63.825(f)(2)–(4), or 63.825(h)(2)–(3) shall be conducted by the owner or operator in accordance with the following:

(1) For permanent total enclosures, capture efficiency shall be assumed as 100 percent. Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to §52.741 of part 52 of this chapter shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.

(2) For temporary total enclosures, the capture efficiency shall be determined according to the protocol specified in §52.741(a)(4)(iii)(B) of part 52 of this chapter. The owner or operator may exclude never-controlled work stations from such capture efficiency determinations.

(f) As an alternative to the procedures specified in §63.827(e) an owner or operator required to conduct a capture efficiency test may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective (DQO) or the Lower Confidence Limit (LCL) approach as described in Appendix A of this subpart. The owner or operator may exclude never-controlled work stations from such capture efficiency determinations.

§ 63.828 Monitoring requirements.

(a) Following the date on which the initial performance test of a control device is completed, to demonstrate continuing compliance with the standard, the owner or operator shall monitor and inspect each control device required to comply with §§63.824–63.825 to ensure proper operation and maintenance by implementing the applicable requirements in paragraph (a)(1) through (a)(5) of this section.

(1) Owners or operators of product and packaging rotogravure or wide-web flexographic presses with intermittently-controllable work stations shall follow one of the procedures in paragraphs (a)(1)(i) through (a)(1)(iv) of this section for each dryer associated with such a work station:

(i) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour, as well as every time the flow direction is changed. The flow control position indicator shall be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(ii) Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration; a visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve or damper is maintained in the closed position and the exhaust stream is not diverted through the bypass line.

(iii) Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position. The monitoring system shall be inspected at least once every month to ensure that it is functioning properly.

(iv) Use an automatic shutdown system in which the press is stopped when flow is diverted away from the control device to any bypass line. The automatic system shall be inspected at least once every month to ensure that it is functioning properly.

(2) Compliance monitoring shall be subject to the provisions of paragraphs (a)(2)(i) and (a)(2)(ii) of this section, as applicable.

(i) All continuous emission monitors shall comply with performance specifications (PS) 8 or 9 of 40 CFR part 60, appendix B, as appropriate. The requirements of appendix F of 40 CFR part 60 shall also be followed. In conducting the quarterly audits required by appendix F, owners or operators must challenge the monitors with compounds representative of the gaseous emission stream being controlled.

(ii) All temperature monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers specifications. The calibration of the chart recorder, data logger, or temperature indicator shall be verified every three months; or the chart recorder, data logger, or temperature indicator shall be replaced. The replacement shall be done either if the owner or operator chooses not to perform the calibration, or if the equipment cannot be calibrated properly.

(3) An owner or operator complying with §§63.824–63.825 through continuous emission monitoring of a control device shall install, calibrate, operate, and maintain continuous emission monitors to measure the total organic volatile matter concentration at both the control device inlet and the outlet.

(4) An owner or operator complying with the requirements of §§63.824–63.825 through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:

(i) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in °C or ±1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.

(ii) For a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in °C or ±1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet.

(5) An owner or operator complying with the requirements of §§63.824–63.825 through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:

(i) Submit to the Administrator with the compliance status report required by §63.9(h) of the General Provisions, a plan that

(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained,

(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance, and

(C) Identifies the specific monitoring procedures;

(ii) Set the operating parameter value, or range of values, that demonstrate compliance with §§63.824–63.825, and

(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

(b) Any excursion from the required operating parameters which are monitored in accordance with paragraphs (a)(4) and (a)(5) of this section, unless otherwise excused, shall be considered a violation of the emission standard.

§ 63.829 Recordkeeping requirements.

(a) The recordkeeping provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall maintain the records specified in paragraphs (b)(1) through (b)(3) of this section on a monthly basis in accordance with the requirements of §63.10(b)(1) of this part:

(1) Records specified in §63.10(b)(2) of this part, of all measurements needed to demonstrate compliance with this standard, such as continuous emission monitor data, control device and capture system operating parameter data, material usage, HAP usage, volatile matter usage, and solids usage that support data that the source is required to report.

(2) Records specified in §63.10(b)(3) of this part for each applicability determination performed by the owner or operator in accordance with the requirements of §63.820(a) of this subpart, and

(3) Records specified in §63.10(c) of this part for each continuous monitoring system operated by the owner or operator in accordance with the requirements of §63.828(a) of this subpart.

(c) Each owner or operator of an affected source subject to this subpart shall maintain records of all liquid-liquid material balances performed in accordance with the requirements of §§63.824–63.825 of this subpart. The records shall be maintained in accordance with the requirements of §63.10(b) of this part.

(d) The owner or operator of each facility which commits to the criteria of §63.820(a)(2) shall maintain records of all required measurements and calculations needed to demonstrate compliance with these criteria, including the mass of all HAP containing materials used and the mass fraction of HAP present in each HAP containing material used, on a monthly basis.

(e) The owner or operator of each facility which meets the limits and criteria of §63.821(b)(1) shall maintain records as required in paragraph (e)(1) of this section. The owner or operator of each facility which meets the limits and criteria of

§63.821(b)(2) shall maintain records as required in paragraph (e)(2) of this section. Owners or operators shall maintain these records for five years, and upon request, submit them to the Administrator.

(1) For each facility which meets the criteria of §63.821(b)(1), the owner or operator shall maintain records of the total volume of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(2) For each facility which meets the criteria of §63.821(b)(2), the owner or operator shall maintain records of the total volume and organic HAP content of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(f) The owner or operator choosing to exclude from an affected source, a product and packaging rotogravure or wide-web flexographic press which meets the limits and criteria of §63.821(a)(2)(ii)(A) shall maintain the records specified in paragraphs (f)(1) and (f)(2) of this section for five years and submit them to the Administrator upon request:

(1) The total mass of each material applied each month on the press, including all inboard and outboard stations, and

(2) The total mass of each material applied each month on the press by product and packaging rotogravure or wide-web flexographic printing operations.

§ 63.830 Reporting requirements.

(a) The reporting provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall submit the reports specified in paragraphs (b)(1) through (b)(6) of this section to the Administrator:

(1) An initial notification required in §63.9(b).

(i) Initial notifications for existing sources shall be submitted no later than one year before the compliance date specified in §63.826(a).

(ii) Initial notifications for new and reconstructed sources shall be submitted as required by §63.9(b).

(iii) For the purpose of this subpart, a Title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA.

(iv) Permit applications shall be submitted by the same due dates as those specified for the initial notifications.

(2) A Notification of Performance Tests specified in §63.7 and §63.9(e) of this part. This notification, and the site-specific test plan required under §63.7(c)(2) shall identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The operating parameter identified in the site-specific test plan shall be considered to be approved unless explicitly disapproved, or unless comments received from the Administrator require monitoring of an alternate parameter.

(3) A Notification of Compliance Status specified in §63.9(h) of this part.

(4) Performance test reports specified in §63.10(d)(2) of this part.

(5) Start-up, shutdown, and malfunction reports specified in §63.10(d)(5) of this part, except that the provisions in subpart A pertaining to start-ups, shutdowns, and malfunctions do not apply unless a control device is used to comply with this subpart.

(i) If actions taken by an owner or operator during a start-up, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not completely consistent with the procedures specified in the source's start-up, shutdown, and malfunction plan specified in §63.6(e)(3) of this part, the owner or operator shall state such information in the report. The start-up, shutdown, or malfunction report shall consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Administrator.

(ii) Separate start-up, shutdown, or malfunction reports are not required if the information is included in the report specified in paragraph (b)(6) of this section.

(6) A summary report specified in §63.10(e)(3) of this part shall be submitted on a semi-annual basis (i.e., once every six-month period). In addition to a report of operating parameter exceedances as required by §63.10(e)(3)(i), the summary report shall include, as applicable:

(i) Exceedances of the standards in §§63.824–63.825.

(ii) Exceedances of either of the criteria of §63.820(a)(2).

(iii) Exceedances of the criterion of §63.821(b)(1) and the criterion of §63.821(b)(2) in the same month.

(iv) Exceedances of the criterion of §63.821(a)(2)(ii)(A).

§ 63.831 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 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 §§63.820 through 63.821 and 63.823 through 63.826.

(2) Approval of alternatives to the test method for organic HAP content determination in §63.827(b) and alternatives to the test method for volatile matter in §63.827(c), and major alternatives to other test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of 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.

[68 FR 37354, June 23, 2003]

§§ 63.832-63.839 [Reserved]

Table 1 to Subpart KK of Part 63—Applicability of General Provisions to Subpart KK

General provisions reference	Applicable to subpart KK	Comment

§ 63.1(a)(1)-(a)(4)	Yes.	
§ 63.1(a)(5)	No.	Section reserved.
§ 63.1(a)(6)-(a)(8)	No.	
§ 63.1(a)(9)	No.	Section reserved.
§ 63.1(a)(10)-(a)(14)	Yes.	
§ 63.1(b)(1)	No.	Subpart KK specifies applicability.
§ 63.1(b)(2)-(b)(3)	Yes.	
§ 63.1(c)(1)	Yes.	
§ 63.1(c)(2)	No.	Area sources are not subject to subpart KK.
§ 63.1(c)(3)	No.	Section reserved.
§ 63.1(c)(4)	Yes.	
§ 63.1(c)(5)	No.	
§ 63.1(d)	No.	Section reserved.
§ 63.1(e)	Yes.	
§ 63.2	Yes.	Additional definitions in subpart KK.
§ 63.3(a)-(c)	Yes.	
§ 63.4(a)(1)-(a)(3)	Yes.	
§ 63.4(a)(4)	No.	Section reserved.
§ 63.4(a)(5)	Yes.	
§ 63.4(b)-(c)	Yes.	
§ 63.5(a)(1)-(a)(2)	Yes.	
§ 63.5(b)(1)	Yes.	
§ 63.5(b)(2)	No.	Section reserved.
§ 63.5(b)(3)-(b)(6)	Yes.	
§ 63.5(c)	No.	Section reserved.
§ 63.5(d)	Yes.	
§ 63.5(e)	Yes.	
§ 63.5(f)	Yes.	
§ 63.6(a)	Yes.	
§ 63.6(b)(1)-(b)(5)	Yes.	
§ 63.6(b)(6)	No.	Section reserved.
§ 63.6(b)(7)	Yes.	
§ 63.6(c)(1)-(c)(2)	Yes.	
§ 63.6(c)(3)-(c)(4)	No.	Sections reserved.
§ 63.6(c)(5)	Yes.	
§ 63.6(d)	No.	Section reserved.
§ 63.6(e)	Yes.	Provisions pertaining to start-ups, shutdowns, malfunctions, and CMS do not apply unless an add-on control system is used.
§ 63.6(f)	Yes.	
§ 63.6(g)	Yes.	
§ 63.6(h)	No.	Subpart KK does not require COMS.
§ 63.6(i)(1)-(i)(14)	Yes.	
§ 63.6(i)(15)	No.	Section reserved.
§ 63.6(i)(16)	Yes.	
§ 63.6(j)	Yes.	

§ 63.7	Yes.	
§ 63.8(a)(1)-(a)(2)	Yes.	
§ 63.8(a)(3)	No.	Section reserved.
§ 63.8(a)(4)	No.	Subpart KK specifies the use of solvent recovery devices or oxidizers.
§ 63.8(b)	Yes.	
§ 63.8(c)(1)-(3)	Yes.	
§ 63.8(c)(4)	No.	Subpart KK specifies CMS sampling requirements.
§ 63.8(c)(5)	No.	Subpart KK does not require COMS.
§ 63.8(c)(6)-(c)(8)	Yes.	Provisions for COMS are not applicable.
§ 63.8(d)-(f)	Yes.	
§ 63.8(g)	No.	Subpart KK specifies CMS data reduction requirements.
§ 63.9(a)	Yes.	
§ 63.9(b)(1)	Yes.	
§ 63.9(b)(2)	Yes.	Initial notification submission date extended.
§ 63.9(b)(3)-(b)(5)	Yes.	
§ 63.9(c)-(e)	Yes.	
§ 63.9(f)	No.	Subpart KK does not require opacity and visible emissions observations.
§ 63.9(g)	Yes.	Provisions for COMS are not applicable.
§ 63.9(h)(1)-(h)(3)	Yes.	
§ 63.9(h)(4)	No.	Section reserved.
§ 63.9(h)(5)-(h)(6)	Yes.	
§ 63.9(i)	Yes.	
§ 63.9(j)	Yes.	
§ 63.10(a)	Yes.	
§ 63.10(b)(1)-(b)(3)	Yes.	
§ 63.10(c)(1)	Yes.	
§ 63.10(c)(2)-(c)(4)	No.	Sections reserved.
§ 63.10(c)(5)-(c)(8)	Yes.	
§ 63.10(c)(9)	No.	Section reserved.
§ 63.10(c)(10)-(c)(15)	Yes.	
§ 63.10(d)(1)-(d)(2)	Yes.	
§ 63.10(d)(3)	No.	Subpart KK does not require opacity and visible emissions observations.
§ 63.10(d)(4)-(d)(5)	Yes.	
§ 63.10(e)	Yes.	Provisions for COMS are not applicable.
§ 63.10(f)	Yes.	
§ 63.11	No.	Subpart KK specifies the use of solvent recovery devices or

		oxidizers.
§ 63.12..................	Yes.	
§ 63.13..................	Yes.	
§ 63.14..................	Yes.	
§ 63.15..................	Yes.	

Appendix A to Subpart KK of Part 63—Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods

1. Introduction

1.1 Alternative capture efficiency (CE) protocols and test methods that satisfy the criteria of either the data quality objective (DQO) approach or the lower confidence limit (LCL) approach are acceptable under §63.827(f). The general criteria for alternative CE protocols and test methods to qualify under either the DQO or LCL approach are described in section 2. The DQO approach and criteria specific to the DQO approach are described in section 3. The LCL approach and criteria specific to the LCL approach are described in section 4. The recommended reporting for alternative CE protocols and test methods are presented in section 5. The recommended recordkeeping for alternative CE protocols and test methods are presented in section 6.

1.2 Although the Procedures L, G.1, G.2, F.1, and F.2 in §52.741 of part 52 were developed for TTE and BE testing, the same procedures can also be used in an alternative CE protocol. For example, a traditional liquid/gas mass balance CE protocol could employ Procedure L to measure liquid VOC input and Procedure G.1 to measure captured VOC.

2. General Criteria for DQO and LCL Approaches

2.1 The following general criteria must be met for an alternative capture efficiency protocol and test methods to qualify under the DQO or LCL approach.

2.2 An alternative CE protocol must consist of at least three valid test runs. Each test run must be at least 20 minutes long. No test run can be longer than 24 hours.

2.3 All test runs must be separate and independent. For example, liquid VOC input and output must be determined independently for each run. The final liquid VOC sample from one run cannot be the initial sample for another run. In addition, liquid input for an entire day cannot be apportioned among test runs based on production.

2.4 Composite liquid samples cannot be used to obtain an "average composition" for a test run. For example, separate initial and final coating samples must be taken and analyzed for each run; initial and final samples cannot be combined prior to analysis to derive an "average composition" for the test run.

2.5 All individual test runs that result in a CE of greater than 105 percent are invalid and must be discarded.

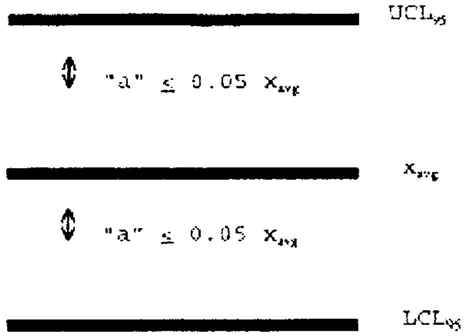
2.6 If the source can demonstrate to the regulatory agency that a test run should not be considered due to an identified testing or analysis error such as spillage of part of the sample during shipping or an upset or improper operating conditions that is not considered part of normal operation then the test result for that individual test run may be discarded. This limited exception allows sources to discard as "outliers" certain individual test runs without replacing them with a valid test run as long as the facility has at least three valid test runs to use when calculating its DQO or LCL. This exception is limited solely to test runs involving the types of errors identified above.

2.7 All valid test runs that are conducted must be included in the average CE determination. The individual test run CE results and average CE results cannot be truncated (i.e., 105 percent cannot be reported as 100+ percent) for purposes of meeting general or specific criteria for either the DQO or the LCL. If the DQO is satisfied and the average CE is greater than 100, then 100 percent CE must be considered the result of the test.

2.8 Alternative test methods for measuring VOC concentration must include a three-point calibration of the gas analysis instrument in the expected concentration range.

3. Data Quality Objective Approach

3.1 The purpose of the DQO is to allow sources to use alternative CE protocols and test methods while ensuring reasonable precision consistent with pertinent requirements of the Clean Air Act. In addition to the general criteria described in section 2, the specific DQO criterion is that the width of the two-sided 95 percent confidence interval of the mean measured value must be less than or equal to 10 percent of the mean measured value (see Figure 1). This ensures that 95 percent of the time, when the DQO is met, the actual CE value will be ±5 percent of the mean measured value (assuming that the test protocol is unbiased).



View or download PDF

3.2 The DQO calculation is made as follows using Equations 1 and 2:

$$P = \frac{a}{x_{avg}} 100 \qquad Eq\ 1 \qquad a = \frac{t_{0.975}\, s}{\sqrt{n}} \qquad Eq\ 2$$

Where:

a=distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval for the measured value.

n=number of valid test runs.

P=DQO indicator statistic, distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval, expressed as a percent of the average measured CE value.

s=sample standard deviation.

$t_{0.975}$=t-value at the 95-percent confidence level (see Table 1).

x_{avg}=average measured CE value (calculated from all valid test runs).

x_i=the CE value calculated from the ith test run.

Number of valid test runs, n	t0.975	t0.90	Number of valid test runs, n	t0.975	t0.90
1 or 2	N/A	N/A	12	2.201	1.363
3	4.303	1.886	13	2.179	1.356
4	3.182	1.638	14	2.160	1.350
5	2.776	1.533	15	2.145	1.345
6	2.571	1.476	16	2.131	1.341
7	2.447	1.440	17	2.120	1.337
8	2.365	1.415	18	2.110	1.333
9	2.306	1.397	19	2.101	1.330
10	2.262	1.383	20	2.093	1.328
1	12.228	1.372	21	2.086	1.325

Table 1—T-Values

3.3 The sample standard deviation and average CE value are calculated using Equations 3 and 4 as follows:

$$s = \left[\frac{\sum_{i-1}^{n} \left(x_i - x_{avg} \right)^2}{n-1} \right]^{0.5} \quad Eq\ 3 \qquad x_{avg} = \frac{\sum_{i-1}^{n} x_i}{n} \quad Eq\ 4$$

3.4 The DQO criteria are achieved when all of the general criteria in section 2 are achieved and P ≤5 percent (i.e., the specific DQO criterion is achieved). In order to meet this objective, facilities may have to conduct more than three test runs. Examples of calculating P, given a finite number of test runs, are shown below. (For purposes of this example it is assumed that all of the general criteria are met.)

3.5 Facility A conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculations shown in Equations 5 and 6:

Run	CE
1	96.1
2	105.0
3	101.2

Therefore:

$n=3$

$t_{0.975}=4.30$

$x_{avg}=100.8$

$s=4.51$

$$a = \frac{(4.30)(4.51)}{\sqrt{n}} = 11.20 \quad Eq\ 5 \qquad P = \frac{11.2}{100.8} 100 = 11.11 \quad Eq\ 6$$

3.6 Since the facility did not meet the specific DQO criterion, they ran three more test runs.

Run	CE
4	93.2
5	96.2
6	87.6

3.7 The calculations for Runs 1–6 are made as follows using Equations 7 and 8:

$n=6$

$t_{0.975}=2.57$

$x_{avg}=96.6$

$s=6.11$

$$a=\frac{(2.57)(6.11)}{\sqrt{6}}=6.41 \qquad Eq\ 7 \qquad P=\frac{6.41}{96.6}100=6.64 \qquad Eq\ 8$$

3.8 The facility still did not meet the specific DQO criterion. They ran three more test runs with the following results:

Run	CE
7	92.9
8	98.3
9	91.0

3.9 The calculations for Runs 1-9 are made as follows using Equations 9 and 10:

$n=9$

$t_{0.975}=2.31$

$x_{avg}=95.7$

$s=5.33$

$$a=\frac{(2.31)(5.33)}{\sqrt{9}}=4.10 \qquad Eq\ 9 \qquad P=\frac{4.10}{95.7}100=4.28 \qquad Eq\ 10$$

3.10 Based on these results, the specific DQO criterion is satisfied. Since all of the general criteria were also satisfied, the average CE from the nine test runs can be used to determine compliance.

4. Lower Confidence Limit Approach

4.1 The purpose of the LCL approach is to provide sources, that may be performing much better than their applicable regulatory requirement, a screening option by which they can demonstrate compliance. The approach uses less precise methods and avoids additional test runs which might otherwise be needed to meet the specific DQO criterion while still being assured of correctly demonstrating compliance. It is designed to reduce "false positive" or so called "Type II errors" which may erroneously indicate compliance where more variable test methods are employed. Because it encourages CE performance greater than that required in exchange for reduced compliance demonstration burden, the sources that successfully use the LCL approach could produce emission reductions beyond allowable emissions. Thus, it could provide additional benefits to the environment as well.

4.2 The LCL approach compares the 80 percent (two-sided) LCL for the mean measured CE value to the applicable CE regulatory requirement. In addition to the general criteria described in section 2, the specific LCL criteria are that either the LCL be greater than or equal to the applicable CE regulatory requirement or that the specific DQO criterion is met. A more detailed description of the LCL approach follows:

4.3 A source conducts an initial series of at least three runs. The owner or operator may choose to conduct additional test runs during the initial test if desired.

4.4 If all of the general criteria are met and the specific DQO criterion is met, then the average CE value is used to determine compliance.

4.5 If the data meet all of the general criteria, but do not meet the specific DQO criterion; and the average CE, using all valid test runs, is above 100 percent then the test sequence cannot be used to calculate the LCL. At this point the facility has the option of (a) conducting more test runs in hopes of meeting the DQO or of bringing the average CE for all test runs below 100 percent so the LCL can be used or (b) discarding all previous test data and retesting.

4.6 The purpose of the requirement in Section 4.5 is to protect against protocols and test methods which may be inherently biased high. This is important because it is impossible to have an actual CE greater than 100 percent and the LCL approach only looks at the lower end variability of the test results. This is different from the DQO which allows average CE values up to 105 percent because the DQO sets both upper and lower limits on test variability.

4.7 If at any point during testing the results meet the DQO, the average CE can be used for demonstrating compliance with the applicable regulatory requirement. Similarly, if the average CE is below 100 percent then the LCL can be used for demonstrating compliance with the applicable regulatory requirement without regard to the DQO.

4.8 The LCL is calculated at a 80 percent (two-sided) confidence level as follows using

Equation 11:

$$LC_1 = x_{avg} - \frac{t_{0.90}s}{\sqrt{n}} \qquad Eq\ 11$$

Where:

LC_1=LCL at a 80 percent (two-sided) confidence level.

n=number of valid test runs.

s=sample standard deviation.

$t_{0.90}$=t-value at the 80-percent (two-sided) confidence level (see Table 3–1).

x_{avg}=average measured CE value (calculated from all valid test runs).

4.9 The resulting LC_1 is compared to the applicable CE regulatory requirement. If LC_1 exceeds (i.e., is higher than) the applicable regulatory requirement, then a facility is in initial compliance. However, if the LC_1 is below the CE requirement, then the facility must conduct additional test runs. After this point the test results will be evaluated not only looking at the LCL, but also the DQO of ±5 percent of the mean at a 95 percent confidence level. If the test results with the additional test runs meet the DQO before the LCL exceeds the applicable CE regulatory requirement, then the average CE value will be compared to the applicable CE regulatory requirement for determination of compliance.

4.10 If there is no specific CE requirement in the applicable regulation, then the applicable CE regulatory requirement is determined based on the applicable regulation and an acceptable destruction efficiency test. If the applicable regulation requires daily compliance and the latest CE compliance demonstration was made using the LCL approach, then the calculated LC_1 will be the highest CE value which a facility is allowed to claim until another CE demonstration test is conducted. This last requirement is necessary to assure both sufficiently reliable test results in all circumstances and the potential environmental benefits referenced above.

4.11 An example of calculating the LCL is shown below. Facility B's applicable regulatory requirement is 85 percent CE. Facility B conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculation shown in Equation 12:

Run	CE
1	94.2
2	97.6
3	90.5

Therefore:

$n=3$

$t_{0.90}=1.886$

$x_{avg}=94.1$

$s=3.55$

$$LC_1 = 94.1 - \frac{(1.886)(3.55)}{\sqrt{3}} = 90.23 \qquad Eq\,12$$

4.12 Since the LC_1 of 90.23 percent is above the applicable regulatory requirement of 85 percent then the facility is in compliance. The facility must continue to accept the LC_1 of 90.23 percent as its CE value until a new series of valid tests is conducted. (The data generated by Facility B do not meet the specific DQO criterion.)

5. Recommended Reporting for Alternative CE Protocols

5.1 If a facility chooses to use alternative CE protocols and test methods that satisfy either the DQO or LCL and the additional criteria in section 4., the following information should be submitted with each test report to the appropriate regulatory agency:

1. A copy of all alternative test methods, including any changes to the EPA reference methods, QA/QC procedures and calibration procedures.

2. A table with information on each liquid sample, including the sample identification, where and when the sample was taken, and the VOC content of the sample;

3. The coating usage for each test run (for protocols in which the liquid VOC input is to be determined);

4. The quantity of captured VOC measured for each test run;

5. The CE calculations and results for each test run;

6. The DQO or LCL calculations and results; and

7. The QA/QC results, including information on calibrations (e.g., how often the instruments were calibrated, the calibration results, and information on calibration gases, if applicable).

6. Recommended Recordkeeping for Alternative CE Protocols.

6.1 A record should be kept at the facility of all raw data recorded during the test in a suitable

form for submittal to the appropriate
regulatory authority upon request.

APPENDIX E

(40 CFR Part 60, Subpart Kb)

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Source: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

(2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance*—(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of §60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see §60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see §60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in §60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in §60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m^3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in §60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in §60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in §60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of §60.112b.

(a) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is

unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet §60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of §60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in §60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, §60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in §60.112b, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in §60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of §60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with §61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(2) and §60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by §60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by §60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by §60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with §60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with §60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with §60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by §60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by §60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under §60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(ii) ASTM D323–82 or 94 (incorporated by reference—see §60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of §60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.117b Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

RECEIVED
AUG 6 2001

JUL 25 2001

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Mr. Michael R. Phillips
General Manager
Gaylord Container Corporation
P.O. Box 7857
Pine Bluff, AR 71611-7857

Dear Mr. Phillips:

This is in response to your letter dated July 2, 2001 which requests the approval of an alternative test method for measuring the hazardous air pollutant (HAP) content of condensate streams at your Kraft pulp mill in Pine Bluff, Arkansas. The method that you are proposing would be an alternative to Method 305 required by 40 CFR Part 63, Subpart S, National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry, Section 63.457. You are proposing to use a procedure titled, "Selected HAPS in Condensates by GC/FID (NCASI Method DI/HAPS-99.01)," developed by the National Council for Air and Stream Improvement (NCASI) to analyze methanol, acetaldehyde, methyl ethyl ketone, and opionaldehyde in condensate streams. I notified the NCASI by letter dated September 22, 00, that this test method met Method 301 criteria for measuring these pollutants in condensate streams, provided that the tester uses the appropriate correction factor. A copy of this letter is enclosed. Based on the data submitted by the NCASI and the similarity of the condensate streams for which you propose to use the method to the condensate streams from which the NCASI collected their supporting data, we are approving your request for use of this alternative test method at your facility in Pine Bluff, Arkansas.

If you need further assistance, please contact Gary McAlister at (919) 541-1062.

Sincerely,

J. David Mobley, Acting Director
Emissions Monitoring and Analysis Division

Enclosures

cc: Donna Ascenzi, Region 6 (6EN-AA)
Thomas Rheaume, AR DEQ
Stephen Shedd, ESD (MD-13)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

SEP 22 2000

Dr. Mary Ann Gunshefski
NCASI
Southern Regional Center
P.O. Box 141020
Gainesville, Florida 32614-1020

Dear Dr. Gunshefski:

We have reviewed your report entitled, "EPA Method 301 Validation Report of the NCASI Method 'Selected HAPS in Condensates By GC/FID.' " We agree with your conclusion that this method, in all of its variations, met Method 301 criteria for measuring acetaldehyde, methanol, propionaldehyde, and methyl ethyl ketone in samples from the pulp and paper mill condensate streams regulated under 40 CFR Part 63, Subpart S, Paragraph 446(b). I have summarized in the enclosed Tables 1-4 the correction factors for the individual HAP's for each of the four variations in the test method. During any future testing, the tester must document and use the appropriate correction factor to correct the data from the test method.

As we discussed, each specific source must make its own alternative test method request. However, we can and will consider the validation data that you submitted in evaluating an alternative method request from any source similar to the ones at which you collected your validation data.

For our records we would like to have an electronic file copy of the test method and the supporting report in Wordperfect 6.x format.

If you have any questions about our comments or you would like to meet to discuss them, please contact Gary McAlister of my staff at (919) 541-1062.

Sincerely,

J. David Mobley, Acting Director
Emissions, Monitoring and Analysis Division

cc:
K. C. Hustvedt (MD-13)
Stephen A. Shedd (MD-13)
Jeffrey A. Telander (MD-13)

Enclosure

Table 1. NCASI Method DI/HAPS-99.01 - Purged-Packed Injector and Cyclohexanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.12
Methanol	Yes	None
Propionaldehyde	Yes	1.12
Methyl Ethyl Ketone	Yes	0.97

Table 2. NCASI Method DI/HAPS-99.01 - Split/Splitless Injector and Cyclohexanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.09
Methanol	Yes	1.04
Propionaldehyde	Yes	1.09
Methyl Ethyl Ketone	Yes	1.03

ble 3. NCASI Method DI/HAPS-99.01 - Purged-Packed Injector and 2,2,2-Trifluoroethanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.14
Methanol	Yes	None
Propionaldehyde	Yes	1.14
Methyl Ethyl Ketone	Yes	1.07

Table 4. NCASI Method DI/HAPS-99.01 - Split/Splitless Injector and 2,2,2-Trifluoroethanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.06
Methanol	Yes	1.01
Propionaldehyde	Yes	1.06
yl Ethyl Ketone	Yes	None

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart MM—National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills

Source: 66 FR 3193, Jan. 12, 2001, unless otherwise noted.

§ 63.860 Applicability and designation of affected source.

(a) The requirements of this subpart apply to the owner or operator of each kraft, soda, sulfite, or stand-alone semichemical pulp mill that is a major source of hazardous air pollutants (HAP) emissions as defined in §63.2.

(b) *Affected sources.* The requirements of this subpart apply to each new or existing affected source listed in paragraphs (b)(1) through (7) of this section:

(1) Each existing chemical recovery system (as defined in §63.861) located at a kraft or soda pulp mill.

(2) Each new nondirect contact evaporator (NDCE) recovery furnace and associated smelt dissolving tank(s) located at a kraft or soda pulp mill.

(3) Each new direct contact evaporator (DCE) recovery furnace system (as defined in §63.861) and associated smelt dissolving tank(s) located at a kraft or soda pulp mill.

(4) Each new lime kiln located at a kraft or soda pulp mill.

(5) Each new or existing sulfite combustion unit located at a sulfite pulp mill, except such existing units at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. AP–10).

(6) Each new or existing semichemical combustion unit located at a stand-alone semichemical pulp mill.

(7) The requirements of the alternative standard in §63.862(d) apply to the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD–14).

(c) The requirements of the General Provisions in subpart A of this part that apply to the owner or operator subject to the requirements of this subpart are identified in Table 1 to this subpart.

[66 FR 3193, Jan. 12, 2001, as amended at 68 FR 7713, Feb. 18, 2003]

§ 63.861 Definitions.

All terms used in this subpart are defined in the Clean Air Act, in subpart A of this part, or in this section. For the purposes of this subpart, if the same term is defined in subpart A or any other subpart of this part and in this section, it must have the meaning given in this section.

Bag leak detection system means an instrument that is capable of monitoring PM loadings in the exhaust of a fabric filter in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative PM loadings.

Black liquor means spent cooking liquor that has been separated from the pulp produced by the kraft, soda, or semichemical pulping process.

Black liquor gasification means the thermochemical conversion of black liquor into a combustible gaseous product.

Black liquor oxidation (BLO) system means the vessels used to oxidize the black liquor, with air or oxygen, and the associated storage tank(s).

Black liquor solids (BLS) means the dry weight of the solids in the black liquor that enters the recovery furnace or semichemical combustion unit.

Black liquor solids firing rate means the rate at which black liquor solids are fed to the recovery furnace or the semichemical combustion unit.

Chemical recovery combustion source means any source in the chemical recovery area of a kraft, soda, sulfite or stand-alone semichemical pulp mill that is an NDCE recovery furnace, a DCE recovery furnace system, a smelt dissolving tank, a lime kiln, a sulfite combustion unit, or a semichemical combustion unit.

Chemical recovery system means all existing DCE and NDCE recovery furnaces, smelt dissolving tanks, and lime kilns at a kraft or soda pulp mill. Each existing recovery furnace, smelt dissolving tank, or lime kiln is considered a process unit within a chemical recovery system.

Direct contact evaporator (DCE) recovery furnace means a kraft or soda recovery furnace equipped with a direct contact evaporator that concentrates strong black liquor by direct contact between the hot recovery furnace exhaust gases and the strong black liquor.

Direct contact evaporator (DCE) recovery furnace system means a direct contact evaporator recovery furnace and any black liquor oxidation system, if present, at the pulp mill.

Dry electrostatic precipitator (ESP) system means an electrostatic precipitator with a dry bottom (*i.e.,* no black liquor, water, or other fluid is used in the ESP bottom) and a dry particulate matter return system (*i.e.,* no black liquor, water, or other fluid is used to transport the collected PM to the mix tank).

Fabric filter means an air pollution control device used to capture PM by filtering a gas stream through filter media; also known as a baghouse.

Hazardous air pollutants (HAP) metals means the sum of all emissions of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A) and with all nondetect data treated as one-half of the method detection limit.

Hog fuel dryer means the equipment that combusts fine particles of wood waste (hog fuel) in a fluidized bed and directs the heated exhaust stream to a rotary dryer containing wet hog fuel to be dried prior to combustion in the hog fuel boiler at Weyerhaeuser Paper Company's Cosmopolis, Washington facility. The hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility is Emission Unit no. HD–14.

Kraft pulp mill means any stationary source that produces pulp from wood by cooking (digesting) wood chips in a solution of sodium hydroxide and sodium sulfide. The recovery process used to regenerate cooking chemicals is also considered part of the kraft pulp mill.

Kraft recovery furnace means a recovery furnace that is used to burn black liquor produced by the kraft pulping process, as well as any recovery furnace that burns black liquor produced from both the kraft and semichemical pulping processes, and includes the direct contact evaporator, if applicable. Includes black liquor gasification.

Lime kiln means the combustion unit (*e.g.,* rotary lime kiln or fluidized-bed calciner) used at a kraft or soda pulp mill to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide (CaO).

Lime production rate means the rate at which dry lime, measured as CaO, is produced in the lime kiln.

Method detection limit means the minimum concentration of an analyte that can be determined with 99 percent confidence that the true value is greater than zero.

Modification means, for the purposes of §63.862(a)(1)(ii)(E)(*1*), any physical change (excluding any routine part replacement or maintenance) or operational change (excluding any operational change that occurs during a start-up, shutdown, or malfunction) that is made to the air pollution control device that could result in an increase in PM emissions.

Nondetect data means, for the purposes of this subpart, any value that is below the method detection limit.

Nondirect contact evaporator (NDCE) recovery furnace means a kraft or soda recovery furnace that burns black liquor that has been concentrated by indirect contact with steam.

Particulate matter (PM) means total particulate matter as measured by EPA Method 5, EPA Method 17 (§63.865(b)(1)), or EPA Method 29 (40 CFR part 60, appendix A).

Process unit means an existing DCE or NDCE recovery furnace, smelt dissolving tank, or lime kiln in a chemical recovery system at a kraft or soda mill.

Recovery furnace means an enclosed combustion device where concentrated black liquor produced by the kraft or soda pulping process is burned to recover pulping chemicals and produce steam. Includes black liquor gasification.

Regenerative thermal oxidizer (RTO) means a thermal oxidizer that transfers heat from the exhaust gas stream to the inlet gas stream by passing the exhaust stream through a bed of ceramic stoneware or other heat-absorbing medium before releasing it to the atmosphere, then reversing the gas flow so the inlet gas stream passes through the heated bed, raising the temperature of the inlet stream close to or at its ignition temperature.

Semichemical combustion unit means any equipment used to combust or pyrolyze black liquor at stand-alone semichemical pulp mills for the purpose of chemical recovery. Includes black liquor gasification.

Similar process units means all existing DCE and NDCE recovery furnaces, smelt dissolving tanks, or lime kilns at a kraft or soda pulp mill.

Smelt dissolving tanks (SDT) means vessels used for dissolving the smelt collected from a kraft or soda recovery furnace.

Soda pulp mill means any stationary source that produces pulp from wood by cooking (digesting) wood chips in a sodium hydroxide solution. The recovery process used to regenerate cooking chemicals is also considered part of the soda pulp mill.

Soda recovery furnace means a recovery furnace used to burn black liquor produced by the soda pulping process and includes the direct contact evaporator, if applicable. Includes black liquor gasification.

Stand-alone semichemical pulp mill means any stationary source that produces pulp from wood by partially digesting wood chips in a chemical solution followed by mechanical defibrating (grinding), and has an onsite chemical recovery process that is not integrated with a kraft pulp mill.

Startup means, for the chemical recovery system employing black liquor gasification at Georgia-Pacific's facility in Big Island, Virginia only, the end of the gasification system commissioning phase. Commissioning is that period of time in which each part of the new gasification system will be checked and operated on its own to make sure it is installed and functions properly. Commissioning will conclude with the successful completion of the gasification technology supplier's performance warranty demonstration, which proves the technology and equipment are performing to warranted levels and the system is ready to be placed in active service. For all other affected sources under this subpart, startup has the meaning given in §63.2.

Sulfite combustion unit means a combustion device, such as a recovery furnace or fluidized-bed reactor, where spent liquor from the sulfite pulping process (i.e., red liquor) is burned to recover pulping chemicals.

Sulfite pulp mill means any stationary source that produces pulp from wood by cooking (digesting) wood chips in a solution of sulfurous acid and bisulfite ions. The recovery process used to regenerate cooking chemicals is also considered part of the sulfite pulp mill.

Total hydrocarbons (THC) means the sum of organic compounds measured as carbon using EPA Method 25A (40 CFR part 60, appendix A).

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001; 68 FR 7713, Feb. 18, 2003]

§ 63.862 Standards.

(a) *Standards for HAP metals: existing sources.* (1) Each owner or operator of an existing kraft or soda pulp mill must comply with the requirements of either paragraph (a)(1)(i) or (ii) of this section.

(i) Each owner or operator of a kraft or soda pulp mill must comply with the PM emissions limits in paragraphs (a)(1)(i)(A) through (C) of this section.

(A) The owner or operator of each existing kraft or soda recovery furnace must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.10 gram per dry standard cubic meter (g/dscm) (0.044 grain per dry standard cubic foot (gr/dscf)) corrected to 8 percent oxygen.

(B) The owner or operator of each existing kraft or soda smelt dissolving tank must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.10 kilogram per megagram (kg/Mg) (0.20 pound per ton (lb/ton)) of black liquor solids fired.

(C) The owner or operator of each existing kraft or soda lime kiln must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.15 g/dscm (0.064 gr/dscf) corrected to 10 percent oxygen.

(ii) As an alternative to meeting the requirements of §63.862(a)(1)(i), each owner or operator of a kraft or soda pulp mill may establish PM emissions limits for each existing kraft or soda recovery furnace, smelt dissolving tank, and lime kiln that operates 6,300 hours per year or more by:

(A) Establishing an overall PM emission limit for each existing process unit in the chemical recovery system at the kraft or soda pulp mill using the methods in §63.865(a)(1) and (2).

(B) The emissions limits for each kraft recovery furnace, smelt dissolving tank, and lime kiln that are used to establish the overall PM limit in paragraph (a)(1)(ii)(A) of this section must not be less stringent than the emissions limitations required by §60.282 of part 60 of this chapter for any kraft recovery furnace, smelt dissolving tank, or lime kiln that is subject to the requirements of §60.282.

(C) Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must ensure that the PM emissions discharged to the atmosphere from each of these sources are less than or equal to the applicable PM emissions limits, established using the methods in §63.865(a)(1), that are used to establish the overall PM emissions limits in paragraph (a)(1)(ii)(A) of this section.

(D) Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must reestablish the emissions limits determined in paragraph (a)(1)(ii)(A) of this section if either of the actions in paragraphs (a)(1)(ii)(D)(*1*) and (*2*) of this section are taken:

(*1*) The air pollution control system for any existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established in paragraph (a)(1)(ii)(A) of this section is modified (as defined in §63.861) or replaced; or

(2) Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established in paragraph (a)(1)(ii)(A) of this section is shut down for more than 60 consecutive days.

(iii) Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln that operates less than 6,300 hours per year must comply with the applicable PM emissions limits for that process unit provided in paragraph (a)(1)(i) of this section.

(2) Except as specified in paragraph (d) of this section, the owner or operator of each existing sulfite combustion unit must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.092 g/dscm (0.040 gr/dscf) corrected to 8 percent oxygen.

(b) *Standards for HAP metals: new sources.* (1) The owner or operator of any new kraft or soda recovery furnace must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.034 g/dscm (0.015 gr/dscf) corrected to 8 percent oxygen.

(2) The owner or operator of any new kraft or soda smelt dissolving tank must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.06 kg/Mg (0.12 lb/ton) of black liquor solids fired.

(3) The owner or operator of any new kraft or soda lime kiln must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.023 g/dscm (0.010 gr/dscf) corrected to 10 percent oxygen.

(4) The owner or operator of any new sulfite combustion unit must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.046 g/dscm (O.020 gr/dscf) corrected to 8 percent oxygen.

(c) *Standards for gaseous organic HAP.* (1) The owner or operator of any new recovery furnace at a kraft or soda pulp mill must ensure that the concentration or gaseous organic HAP, as meauared by methanol, discharged to the atmosphere is no greater than 0.012 kg/Mg (0.025 lb/ton) of black liquor solids fired.

(2) The owner or operator of each existing or new semichemical combustion unit must ensure that:

(i) The concentration of gaseous organic HAP, as measured by total hydrocarbons reported as carbon, discharged to the atmosphere is less than or equal to 1.49 kg/Mg (2.97 lb/ton) of black liquor solids fired; or

(ii) The gaseous organic HAP emissions, as measured by total hydrocarbons reported as carbon, are reduced by at least 90 percent prior to discharge of the gases to the atmosphere.

(d) *Alternative standard.* As an alternative to meeting the requirements of paragraph (a)(2) of this section, the owner or operator of the existing hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD–14) must ensure that the mass of PM in the exhaust gases discharged to the atmosphere from the hog fuel dryer is less than or equal to 4.535 kilograms per hour (kg/hr) (10.0 pounds per hour (lb/hr)).

[66 FR 3193, Jan. 12, 2001, as amended at 68 FR 7713, Feb. 18, 2003; 68 FR 67954, Dec. 5, 2003]

§ 63.863 Compliance dates.

(a) The owner or operator of an existing affected source or process unit must comply with the requirements in this subpart no later than March 13, 2004.

(b) The owner or operator of a new affected source that has an initial startup date after March 13, 2001 must comply with the requirements in this subpart immediately upon startup of the affected source, except as specified in §63.6(b).

(c) The two existing semichemical combustion units at Georgia-Pacific Corporation's Big Island, VA facility must comply with the requirements of this subpart no later than March 13, 2004, except as provided in paragraphs (c)(1) and (c)(2) of this section.

(1) If Georgia-Pacific Corporation constructs a new black liquor gasification system at Big Island, VA, determines that its attempt to start up the new system has been a failure and, therefore, must construct another type of chemical recovery unit to replace the two existing semichemical combustion units at Big Island, then the two existing semichemical combustion units must comply with the requirements of this subpart by the earliest of the following dates: three years after Georgia-Pacific declares the gasification system a failure, upon startup of the new replacement unit(s), or March 1, 2008.

(2) After March 13, 2004 and if Georgia-Pacific Corporation constructs and successfully starts up a new black liquor gasification system, the provisions of this subpart will not apply to the two existing semichemical combustion units at Georgia-Pacific's facility in Big Island, VA for up to 1500 hours, while Georgia-Pacific conducts trials of the new gasification system on black liquor from a Kraft pulp mill.

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001; 66 FR 37593, July 19, 2001; 68 FR 46108, Aug. 5, 2003]

§ 63.864 Monitoring requirements.

(a)–(c) [Reserved]

(d) *Continuous opacity monitoring system (COMS).* The owner or operator of each affected kraft or soda recovery furnace or lime kiln equipped with an ESP must install, calibrate, maintain, and operate a COMS according to the provisions in §§63.6(h) and 63.8 and paragraphs (d)(1) through (4) of this section.

(1)–(2) [Reserved]

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

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

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

(1)–(9) [Reserved]

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

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

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

(11) The owner or operator of each affected semichemical combustion unit equipped with an RTO must install, calibrate, maintain, and operate a CPMS that can be used to determine and record the operating temperature of the RTO at least once every successive 15-minute period using the procedures in §63.8(c). The monitor must compute and record the operating temperature at the point of incineration of effluent gases that are emitted using a temperature monitor accurate to within ±1 percent of the temperature being measured.

(12) The owner or operator of the affected hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD–14) must meet the requirements in paragraphs (e)(12)(i) through (xi) of this section for each bag leak detection system.

(i) The owner or operator must install, calibrate, maintain, and operate each triboelectric bag leak detection system according to the "Fabric Filter Bag Leak

Detection Guidance," (EPA–454/R–98–015, September 1997). This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality Planning and Standards; Emissions, Monitoring and Analysis Division; Emission Measurement Center, MD-D205-02, Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network under Emission Measurement Center Continuous Emission Monitoring. The owner or operator must install, calibrate, maintain, and operate other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations.

(ii) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(iii) The bag leak detection system sensor must provide an output of relative PM loadings.

(iv) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(v) The bag leak detection system must be equipped with an audible alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(vi) For positive pressure fabric filter systems, a bag leak detector must be installed in each baghouse compartment or cell.

(vii) For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(ix) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time according to section 5.0 of the "Fabric Filter Bag Leak Detection Guidance."

(x) Following initial adjustment of the system, the sensitivity or range, averaging period, alarm set points, or alarm delay time may not be adjusted except as detailed in the site-specific monitoring plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition. Record each adjustment.

(xi) The owner or operator must record the results of each inspection, calibration, and validation check.

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

(14) The owner or operator of each affected source or process unit that uses an air pollution control system other than an ESP, wet scrubber, RTO, or fabric filter must provide to the Administrator an alternative monitoring request that includes the site-specific monitoring plan described in paragraph (a) of this section, a description of the control device, test results verifying the performance of the control device, the appropriate operating parameters that will be monitored, and the frequency of measuring and recording to establish continuous compliance with the standards. The alternative monitoring request is subject to the Administrator's approval. The owner or operator of the affected source or process unit must install, calibrate, operate, and maintain the monitor(s) in accordance with the alternative monitoring request approved by the Administrator. The owner or operator must include in the information submitted to the Administrator proposed performance specifications and quality assurance procedures for the monitors. The Administrator may request further information and will approve acceptable test methods and procedures. The owner or operator must monitor the parameters as approved by the Administrator using the methods and procedures in the alternative monitoring request.

(f) [Reserved]

(g) The owner or operator of each affected source or process unit complying with the gaseous organic HAP standard of §63.862(c)(1) through the use of an NDCE recovery furnace equipped with a dry ESP system is not required to conduct any continuous monitoring to demonstrate compliance with the gaseous organic HAP standard.

(h)–(i) [Reserved]

(j) *Determination of operating ranges.* (1) During the initial performance test required in §63.865, the owner or operator of any affected source or process unit must establish operating ranges for the monitoring parameters in paragraphs (e)(10) through (14) of this section, as appropriate; or

(2) The owner or operator may base operating ranges on values recorded during previous performance tests or conduct additional performance tests for the specific purpose of establishing operating ranges, provided that test data used to establish the operating ranges are or have been obtained using the test methods required in this subpart. The owner or operator of the affected source or process unit must certify that all control techniques and processes have not been modified subsequent to the testing

upon which the data used to establish the operating parameter ranges were obtained.

(3) The owner or operator of an affected source or process unit may establish expanded or replacement operating ranges for the monitoring parameter values listed in paragraphs (e)(10) through (14) of this section and established in paragraph (j)(1) or (2) of this section during subsequent performance tests using the test methods in §63.865.

(4) The owner or operator of the affected source or process unit must continuously monitor each parameter and determine the arithmetic average value of each parameter during each performance test. Multiple performance tests may be conducted to establish a range of parameter values.

(5)–(6) [Reserved]

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

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

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

(iii) For a new or existing semichemical combustion unit equipped with an RTO, when any 1-hour average temperature falls below the temperature established in paragraph (j) of this section;

(iv) For the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD–14), when the bag leak detection system alarm sounds.

(v) For an affected source or process unit equipped with an ESP, wet scrubber, RTO, or fabric filter and monitoring alternative operating parameters established in paragraph (e)(13) of this section, when any 3-hour average value is outside the range of parameter values established in paragraph (j) of this section; and

(vi) For an affected source or process unit equipped with an alternative air pollution control system and monitoring operating parameters approved by the Administrator as established in paragraph (e)(14) of this section, when any 3-hour average value is outside the range of parameter values established in paragraph (j) of this section.

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

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

(ii) For a new kraft or soda recovery furnace or a new or existing lime kiln equipped with an ESP, when opacity is greater than 20 percent for 6 percent or more of the operating time within any quarterly period;

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

(iv) For a new or existing semichemical combustion unit equipped with an RTO, when any 3-hour average temperature falls below the temperature established in paragraph (j) of this section;

(v) For the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD–14), when corrective action is not initiated within 1 hour of a bag leak detection system alarm, corrective action is not completed in accordance with the startup, shutdown, and malfunction plan, and the alarm is engaged for more than 5 percent of the total operating time in a 6-month block reporting period. In calculating the operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted; if corrective action is required, each alarm is counted as a minimum of 1 hour; if corrective action is not initiated within 1 hour, the alarm time is counted as the actual amount of time taken to initiate corrective action.

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

(vii) For an affected source or process unit equipped with an alternative air pollution control system and monitoring operating parameters approved by the Administrator as established in paragraph (e)(14) of this section, when six or more 3-hour average values within any 6-month reporting period are outside the range of parameter values established in paragraph (j) of this section.

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

[68 FR 7713, Feb. 18, 2003, as amended at 68 FR 42605, July 18, 2003; 68 FR 67955, Dec. 5, 2003]

§ 63.865 Performance test requirements and test methods.

The owner or operator of each affected source or process unit subject to the requirements of this subpart is required to conduct an initial performance test using the test methods and procedures listed in §63.7 and paragraph (b) of this section, except as provided in paragraph (c)(1) of this section.

(a) The owner or operator of a process unit seeking to comply with a PM emission limit under §63.862(a)(1)(ii)(A) must use the procedures in paragraphs (a)(1) and (2) of this section:

(1) Determine the overall PM emission limit for the chemical recovery system at the mill using Equation 1 of this section as follows:

$$EL_{PM} = \frac{\left[(C_{ref,RF})(Q_{RFtot}) + (C_{ref,LK})(Q_{LKtot})\right](F1)}{(BLS_{tot})} + ER1_{ref,SDT} \qquad \text{(Eq. 1)}$$

Where:

EL_{PM} = overall PM emission limit for all existing process units in the chemical recovery system at the kraft or soda pulp mill, kg/Mg (lb/ton) of black liquor solids fired.

$C_{ref,RF}$ = reference concentration of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen for existing kraft or soda recovery furnaces.

Q_{RFtot} = sum of the average volumetric gas flow rates measured during the performance test and corrected to 8 percent oxygen for all existing recovery furnaces in the chemical recovery system at the kraft or soda pulp mill, dry standard cubic meters per minute (dscm/min) (dry standard cubic feet per minute (dscf/min)).

$C_{ref,LK}$ = reference concentration of 0.15 g/dscm (0.064 gr/dscf) corrected to 10 percent oxygen for existing kraft or soda lime kilns.

Q_{LKtot} = sum of the average volumetric gas flow rates measured during the performance test and corrected to 10 percent oxygen for all existing lime kilns in the chemical recovery system at the kraft or soda pulp mill, dscm/min (dscf/min).

F1 = conversion factor, 1.44 minutes·kilogram/day·gram (min·kg/d·g) (0.206 minutes·pound/day·grain (min·b/d·gr)).

BLS_{tot} = sum of the average black liquor solids firing rates of all existing recovery furnaces in the chemical recovery system at the kraft or soda pulp mill measured during the performance test, megagrams per day (Mg/d) (tons per day (ton/d)) of black liquor solids fired.

$ER1_{ref, SDT}$ = reference emission rate of 0.10 kg/Mg (0.20 lb/ton) of black liquor solids fired for existing kraft or soda smelt dissolving tanks.

(2) Establish an emission limit for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln; and, using these emissions limits, determine the overall PM emission rate for the chemical recovery system at the mill using the procedures in paragraphs (a)(2)(i) through (v) of this section, such that the overall PM emission rate calculated in paragraph (a)(2)(v) of this section is less than or equal to the overall PM emission limit determined in paragraph (a)(1) of this section, as appropriate.

(i) The PM emission rate from each affected recovery furnace must be determined using Equation 2 of this section as follows:

$$ER_{RF} = (F1)(C_{EL,RF})(Q_{RF})/(BLS) \qquad (Eq.\ 2)$$

Where:

ER_{RF}=emission rate from each recovery furnace, kg/Mg (lb/ton) of black liquor solids.

F1=conversion factor, 1.44 min·kg/d·g (0.206 min·/d·gr).

$C_{EL, RF}$=PM emission limit proposed by owner or operator for the recovery furnace, g/dscm (gr/dscf) corrected to 8 percent oxygen.

Q_{RF}=average volumetric gas flow rate from the recovery furnace measured during the performance test and corrected to 8 percent oxygen, dscm/min (dscf/min).

BLS=average black liquor solids firing rate of the recovery furnace measured during the performance test, Mg/d (ton/d) of black liquor solids.

(ii) The PM emission rate from each affected smelt dissolving tank must be determined using Equation 3 of this section as follows:

$$ER_{SDT} = (F1)(C_{EL,SDT})(Q_{SDT})/(BLS) \qquad (Eq.\ 3)$$

Where:

ER_{SDT}=emission rate from each SDT, kg/Mg (lb/ton) of black liquor solids fired.

F1=conversion factor, 1.44 min·kg/d•g (0.206 min·lb/d·gr).

$C_{EL,\,SDT}$=PM emission limit proposed by owner or operator for the smelt dissolving tank, g/dscm (gr/dscf).

Q_{SDT}=average volumetric gas flow rate from the smelt dissolving tank measured during the performance test, dscm/min (dscf/min).

BLS=average black liquor solids firing rate of the associated recovery furnace measured during the performance test, Mg/d (ton/d) of black liquorsolids fired. If more than one SDT is used to dissolve the smelt from a given recovery furnace, then the black liquor solids firing rate of the furnace must be proportioned according to the size of the SDT.

(iii) The PM emission rate from each affected lime kiln must be determined using Equation 4 of this section as follows:

$$ER_{LK} = (F1)(C_{EL,LK})(Q_{LK})(CaO_{tot}/BLS_{tot})/(CaO_{LK}) \qquad (Eq.\ 4)$$

Where:

ER_{LK}=emission rate from each lime kiln, kg/Mg (lb/ton) of black liquor solids.

F1=conversion factor, 1.44 min·kg/d·g (0.206 min·lb/d·gr).

$C_{EL,LK}$=PM emission limit proposed by owner or operator for the lime kiln, g/dscm (gr/dscf) corrected to 10 percent oxygen.

Q_{LK}=average volumetric gas flow rate from the lime kiln measured during the performance test and corrected to 10 percent oxygen, dscm/min (dscf/min).

CaO_{LK}=lime production rate of the lime kiln, measured as CaO during the performance test, Mg/d (ton/d) of CaO.

CaO_{tot}=sum of the average lime production rates for all existing lime kilns in the chemical recovery system at the mill measured as CaO during the performance test, Mg/d (ton/d).

BLS_{tot}=sum of the average black liquor solids firing rates of all recovery furnaces in the chemical recovery system at the mill measured during the performance test, Mg/d (ton/d) of black liquor solids.

(iv) If more than one similar process unit is operated in the chemical recovery system at the kraft or soda pulp mill, Equation 5 of this section must be used to calculate the overall PM emission rate from all similar process units in the chemical recovery system at the mill and must be used in determining the overall PM emission rate for the chemical recovery system at the mill:

$$ER_{PUtot} = ER_{PU1}\left(PR_{PU1}/PR_{tot}\right) + \ldots + \left(ER_{PUi}\right)\left(PR_{PUi}/PR_{tot}\right) \qquad (Eq.\ 5)$$

Where:

ER_{PUtot}=overall PM emission rate from all similar process units, kg/Mg (lb/ton) of black liquor solids fired.

ER_{PU1}=PM emission rate from process unit No. 1, kg/Mg (lb/ton) of black liquor solids fired, calculated using Equation 2, 3, or 4 in paragraphs (a)(2)(i) through (iii) of this section.

PR_{PU1}=black liquor solids firing rate in Mg/d (ton/d) for process unit No. 1, if process unit is a recovery furnace or SDT. The CaO production rate in Mg/d (ton/d) for process unit No. 1, if process unit is a lime kiln.

PR_{tot}=total black liquor solids firing rate in Mg/d (ton/d) for all recovery furnaces in the chemical recovery system at the kraft or soda pulp mill if the similar process units are recovery furnaces or SDT, or the total CaO production rate in Mg/d (ton/d) for all lime kilns in the chemical recovery system at the mill if the similar process units are lime kilns.

ER_{PUi}=PM emission rate from process unit No. i, kg/Mg (lb/ton) of black liquor solids fired.

PR_{PUi}=black liquor solids firing rate in Mg/d (ton/d) for process unit No. i, if process unit is a recovery furnace or SDT. The CaO production rate in Mg/d (ton/d) for process unit No. i, if process unit is a lime kiln.

i=number of similar process units located in the chemical recovery system at the kraft or soda pulp mill.

(v) The overall PM emission rate for the chemical recovery system at the mill must be determined using Equation 6 of this section as follows:

$$ER_{tot} = ER_{RFtot} + ER_{SDTtot} + ER_{LKtot} \qquad (Eq.\ 6)$$

Where:

ER_{tot}=overall PM emission rate for the chemical recovery system at the mill, kg/Mg (lb/ton) of black liquor solids fired.

ER_{RFtot}=PM emission rate from all kraft or soda recovery furnaces, calculated using Equation 2 or 5 in paragraphs (a)(2)(i) and (iv) of this section, where applicable, kg/Mg (lb/ton) of black liquor solids fired.

ER_{SDTtot}=PM emission rate from all smelt dissolving tanks, calculated using Equation 3 or 5 in paragraphs (a)(2)(ii) and (iv) of this section, where applicable, kg/Mg (lb/ton) of black liquor solids fired.

ER_{LKtot}=PM emission rate from all lime kilns, calculated using Equation 4 or 5 in paragraphs (a)(2)(iii) and (iv) of this section, where applicable, kg/Mg (lb/ton) of black liquor solids fired.

(vi) After the Administrator has approved the PM emissions limits for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, the owner or operator complying with an overall PM emission limit established in §63.862(a)(1)(ii) must demonstrate compliance with the HAP metals standard by demonstrating compliance with the approved PM emissions limits for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, using the test methods and procedures in paragraph (b) of this section.

(b) The owner or operator seeking to determine compliance with §63.862(a), (b), or (d) must use the procedures in paragraphs (b)(1) through (6) of this section.

(1) For purposes of determining the concentration or mass of PM emitted from each kraft or soda recovery furnace, sulfite combustion unit, smelt dissolving tank, lime kiln, or the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD–14), Method 5 or 29 in appendix A of 40 CFR part 60 must be used, except that Method 17 in appendix A of 40 CFR part 60 may be used in lieu of Method 5 or Method 29 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 205 °C (400 °F). For Methods 5, 29, and 17, the sampling time and sample volume for each run must be at least 60 minutes and 0.90 dscm (31.8 dscf), and water must be used as the cleanup solvent instead of acetone in the sample recovery procedure.

(2) For sources complying with §63.862(a) or (b), the PM concentration must be corrected to the appropriate oxygen concentration using Equation 7 of this section as follows:

$$C_{corr} = C_{meas} \times \frac{(21-X)}{(21-Y)} \qquad \text{(Eq. 7)}$$

Where:

C_{corr} = The measured concentration corrected for oxygen, g/dscm (gr/dscf);

C_{meas} = The measured concentration uncorrected for oxygen, g/dscm (gr/dscf);

X = The corrected volumetric oxygen concentration (8 percent for kraft or soda recovery furnaces and sulfite combustion units and 10 percent for kraft or soda lime kilns); and

Y = The measured average volumetric oxygen concentration.

(3) Method 3A or 3B in appendix A of 40 CFR part 60 must be used to determine the oxygen concentration. The voluntary consensus standard ANSI/ASME PTC 19.10–1981—Part 10 (incorporated by reference—see §63.14) may be used as an alternative to using Method 3B. The gas sample must be taken at the same time and at the same traverse points as the particulate sample.

(4) For purposes of complying with of §63.862(a)(1)(ii)(A), the volumetric gas flow rate must be corrected to the appropriate oxygen concentration using Equation 8 of this section as follows:

$$Q_{corr}=Qmeas\times(21-Y)/(21-X) \quad \text{(Eq. 8)}$$

Where:

Q_{corr}=the measured volumetric gas flow rate corrected for oxygen, dscm/min (dscf/min).

Q_{meas}=the measured volumetric gas flow rate uncorrected for oxygen, dscm/min (dscf/min).

Y=the measured average volumetric oxygen concentration.

X=the corrected volumetric oxygen concentration (8 percent for kraft or soda recovery furnaces and 10 percent for kraft or soda lime kilns).

(5)(i) For purposes of selecting sampling port location and number of traverse points, Method 1 or 1A in appendix A of 40 CFR part 60 must be used;

(ii) For purposes of determining stack gas velocity and volumetric flow rate, Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A of 40 CFR part 60 must be used;

(iii) For purposes of conducting gas analysis, Method 3, 3A, or 3B in appendix A of 40 CFR part 60 must be used. The voluntary consensus standard ANSI/ASME PTC 19.10–1981—Part 10 (incorporated by reference—see §63.14) may be used as an alternative to using Method 3B; and

(iv) For purposes of determining moisture content of stack gas, Method 4 in appendix A of 40 CFR part 60 must be used.

(6) Process data measured during the performance test must be used to determine the black liquor solids firing rate on a dry basis and the CaO production rate.

(c) The owner or operator of each affected source or process unit complying with the gaseous organic HAP standard in §63.862(c)(1) must demonstrate compliance according to the provisions in paragraphs (c)(1) and (2) of this section.

(1) The owner or operator complying through the use of an NDCE recovery furnace equipped with a dry ESP system is not required to conduct any performance testing to demonstrate compliance with the gaseous organic HAP standard.

(2) The owner or operator complying without using an NDCE recovery furnace equipped with a dry ESP system must use Method 308 in appendix A of this part, as well as the methods listed in paragraphs (b)(5)(i) through (iv) of this section. The sampling time and sample volume for each Method 308 run must be at least 60 minutes and 0.014 dscm (0.50 dscf), respectively.

(i) The emission rate from any new NDCE recovery furnace must be determined using Equation 9 of this section as follows:

$$ER_{NDCE} = \frac{(MR_{meas})}{BLS} \qquad \text{(Eq. 9)}$$

Where:

ER_{NDCE} = Methanol emission rate from the NDCE recovery furnace, kg/Mg (lb/ton) of black liquor solids fired;

MR_{meas} = Measured methanol mass emission rate from the NDCE recovery furnace, kg/hr (lb/hr); and

BLS = Average black liquor solids firing rate of the NDCE recovery furnace, megagrams per hour (Mg/hr) (tons per hour (ton/hr)) determined using process data measured during the performance test.

(ii) The emission rate from any new DCE recovery furnace system must be determined using Equation 10 of this section as follows:

$$ER_{DCE} = \left[\frac{(MR_{meas,RF})}{BLS_{RF}}\right] + \left[\frac{MR_{meas,BLO}}{BLS_{BLO}}\right] \qquad \text{(Eq. 10)}$$

Where:

ER_{DCE} = Methanol emission rate from each DCE recovery furnace system, kg/Mg (lb/ton) of black liquor solids fired;

$MR_{meas,RF}$ = Average measured methanol mass emission rate from each DCE recovery furnace, kg/hr (lb/hr);

$MR_{meas,BLO}$ = Average measured methanol mass emission rate from the black liquor oxidation system, kg/hr (lb/hr);

BLS_{RF} = Average black liquor solids firing rate for each DCE recovery furnace, Mg/hr (ton/hr) determined using process data measured during the performance test; and

BLS_{BLO} = The average mass rate of black liquor solids treated in the black liquor oxidation system, Mg/hr (ton/hr) determined using process data measured during the performance test.

(d) The owner or operator seeking to determine compliance with the gaseous organic HAP standards in §63.862(c)(2) for semichemical combustion units must use Method 25A in appendix A of 40 CFR part 60, as well as the methods listed in paragraphs (b)(5)(i) through (iv) of this section. The sampling time for each Method 25A run must be at least 60 minutes. The calibration gas for each Method 25A run must be propane.

(1) The emission rate from any new or existing semichemical combustion unit must be determined using Equation 11 of this section as follows:

$$ER_{SCCU} = \frac{(THC_{meas})}{BLS} \qquad \text{(Eq. 11)}$$

Where:

ER_{SCCU} = THC emission rate reported as carbon from each semichemical combustion unit, kg/Mg (lb/ton) of black liquor solids fired;

THC_{meas} = Measured THC mass emission rate reported as carbon, kg/hr (lb/hr); and

BLS = Average black liquor solids firing rate, Mg/hr (ton/hr); determined using process data measured during the performance test.

(2) If the owner or operator of the semichemical combustion unit has selected the percentage reduction standards for THC, under §63.862(c)(2)(ii), the percentage reduction in THC emissions is computed using Equation 12 of this section as follows, provided that Ei and Eo are measured simultaneously:

$$(\%R_{THC}) = \left(\frac{E_i - E_o}{E_i}\right) \times 100 \qquad (Eq.\ 12)$$

Where:

$\%R_{THC}$ = percentage reduction of total hydrocarbons emissions achieved.

E_i = measured THC mass emission rate at the THC control device inlet, kg/hr (lb/hr).

E_o = measured THC mass emission rate at the THC control device outlet, kg/hr (lb/hr).

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 37593, July 19, 2001; 68 FR 7716, Feb. 18, 2003; 68 FR 67955, Dec. 5, 2003]

§ 63.866 Recordkeeping requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(7) For the bag leak detection system on the hog fuel dryer fabric filter at

Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD–14), records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken.

(d) For operation under §63.863(c)(2), Georgia-Pacific Corporation must keep a record of the hours of operation of the two existing semichemical combustion units at their Big Island, VA facility.

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001; 68 FR 7718, Feb. 18, 2003; 69 FR 25323, May 6, 2004]

§ 63.867 Reporting requirements.

(a) *Notifications.* (1) The owner or operator of any affected source or process unit must submit the applicable notifications from subpart A of this part, as specified in Table 1 of this subpart.

(2) Notifications specific to Georgia-Pacific Corporation's affected sources in Big Island, Virginia.

(i) For a compliance extension under §63.863(c)(1), submit a notice that provides the date of Georgia-Pacific's determination that the black liquor gasification system is not successful and the reasons why the technology is not successful. The notice must be submitted within 15 days of Georgia-Pacific's determination, but not later than March 16, 2005.

(ii) For operation under §63.863(c)(2), submit a notice providing: a statement that Georgia-Pacific Corporation intends to run the Kraft black liquor trials, the anticipated period in which the trials will take place, and a statement explaining why the trials could not be conducted prior to March 1, 2005. The notice must be submitted at least 30 days prior to the start of the Kraft liquor trials.

(3) In addition to the requirements in subpart A of this part, the owner or operator of the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington, facility (Emission Unit no. HD–14) must include analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in §63.864(e)(12) in the Notification of Compliance Status.

(b) *Additional reporting requirements for HAP metals standards.* (1) Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) must submit the PM emissions limits determined in §63.865(a) for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln to the Administrator for approval. The emissions limits must be submitted as part of the notification of compliance status required under subpart A of this part.

(2) Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) must submit the calculations and supporting documentation used in §63.865(a)(1) and (2) to the Administrator as part of the notification of compliance status required under subpart A of this part.

(3) After the Administrator has approved the emissions limits for any process unit, the owner or operator of a process unit must notify the Administrator before any of the actions in paragraphs (b)(3)(i) through (iv) of this section are taken:

(i) The air pollution control system for any process unit is modified or replaced;

(ii) Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln in a chemical recovery system at a kraft or soda pulp mill complying with the PM emissions limits in §63.862(a)(1)(ii) is shut down for more than 60 consecutive days;

(iii) A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit is changed; or

(iv) The black liquor solids firing rate for any kraft or soda recovery furnace during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.

(4) An owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) and seeking to perform the actions in paragraph (b)(3)(i) or (ii) of this section must recalculate the overall PM emissions limit for the group of process units and resubmit the documentation required in paragraph (b)(2) of this section to the Administrator. All modified PM emissions limits are subject to approval by the Administrator.

(c) *Excess emissions report.* The owner or operator must report quarterly if measured parameters meet any of the conditions specified in paragraph (k)(1) or (2) of §63.864. This report must contain the information specified in §63.10(c) of this part as well as the number and duration of occurrences when the source met or exceeded the conditions in §63.864(k)(1), and the number and duration of occurrences when the source met or exceeded the conditions in §63.864(k)(2). Reporting excess emissions below the violation thresholds of §63.864(k) does not constitute a violation of the applicable standard.

(1) When no exceedances of parameters have occurred, the owner or operator must submit a semiannual report stating that no excess emissions occurred during the reporting period.

(2) The owner or operator of an affected source or process unit subject to the requirements of this subpart and subpart S of this part may combine excess emissions and/or summary reports for the mill.

[66 FR 3193, Jan. 12, 2001 as amended at 66 FR 16408, Mar. 26, 2001; 68 FR 7718, Feb. 18, 2003; 68 FR 42605, July 18, 2003; 68 FR 46108, Aug. 5, 2003; 69 FR 25323, May 6, 2004]

§ 63.868 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Clean Air Act, the authorities contained in paragraph (b) of this section must be retained by the Administrator and not transferred to a State.

(b) The authorities which will not be delegated to States are listed in paragraphs (b)(1) through (4) of this section:

(1) Approval of alternatives to standards in §63.862 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

Table 1 to Subpart MM of Part 63—General Provisions Applicability To Subpart MM

General provisions reference	Summary of requirements	Applies to supbart MM	Explanation
63.1(a)(1)	General applicability of the General Provisions.	Yes	Additional terms defined in § 63.861; when overlap between subparts A and MM of this part, subpart MM takes precedence.
63.1(a)(2)-(14)	General applicability of the General Provisions.	Yes	
63.1(b)(1)	Initial applicability determination..	No	Subpart MM specifies the applicability in § 63.860.
63.1(b)(2)	Title V operating permit see 40 CFR part 70.	Yes	All major affected sources are required to obtain a title V permit.
63.1(b)(3)	Record of the applicability determination.	No	All affected sources are subject to subpart MM according

			to the applicability definition of subpart MM.
63.1(c)(1)	Applicability of subpart A of this part after a relevant standard has been set.	Yes	Subpart MM clarifies the applicability of each paragraph of subpart A of this part to sources subject to subpart MM.
63.1(c)(2)	Title V permit requirement.	Yes	All major affected sources are required to obtain a title V permit. There are no area sources in the pulp and paper mill source category.
63.1(c)(3)	[Reserved]	NA	
63.1(c)(4)	Requirements for existing source that obtains an extension of compliance.	Yes	
63.1(c)(5)	Notification requirements for an area source that increases HAP emissions to major source levels.	Yes	
63.1(d)	[Reserved]	NA	
63.1(e)	Applicability of permit program before a relevant standard has been set.	Yes	
63.2	Definitions	Yes	Additional terms defined in § 63.861; when overlap between subparts A and MM of this part occurs, subpart MM takes precedence.
63.3	Units and abbreviations.	Yes	
63.4	Prohibited activities and circumvention.	Yes	
63.5(a)	Construction and reconstruction_applicability.	Yes	
63.5(b)(1)	Upon construction, relevant standards for new sources.	Yes	
63.5(b)(2)	[Reserved]	NA	
63.5(b)(3)	New construction/ reconstruction.	Yes	
63.5(b)(4)	Construction/ reconstruction	Yes	

	notification.		
63.5(b)(5)	Construction/ reconstruction compliance.	Yes	
63.5(b)(6)	Equipment addition or process change.	Yes	
63.5(c)	[Reserved]	NA	
63.5(d)	Application for approval of construction/ reconstruction.	Yes	
63.5(e)	Construction/ reconstruction approval.	Yes	
63.5(f)	Construction/ reconstruction approval based on prior State preconstruction review.	Yes	
63.6(a)(1)	Compliance with standards and maintenance requirements_applicability.	Yes	
63.6(a)(2)	Requirements for area source that increases emissions to become major.	Yes	
63.6(b)	Compliance dates for new and reconstructed sources.	Yes	
63.6(c)	Compliance dates for existing sources.	Yes, except for sources granted extensions under 63.863(c).	Subpart MM specifically stipulates the compliance schedule for existing sources.
63.6(d)	[Reserved]	NA	
63.6(e)	Operation and maintenance requirements.	Yes	
63.6(f)	Compliance with nonopacity emissions standards.	Yes	
63.6(g)	Compliance with alternative nonopacity emissions standards.	Yes	
63.6(h)	Compliance with opacity and visible emissions (VE) standards.	Yes	Subpart MM does not contain any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.

63.6(i).........................	Extension of compliance with emission standards.	Yes, except for sources granted extensions under 63.863(c).	
63.6(j).........................	Exemption from compliance with emissions standards.	Yes............................	
63.7(a)(1)......................	Performance testing requirements_applicability.	Yes....................	§ 63.865(c)(1) specifies the only exemption from performance testing allowed under subpart MM.
63.7(a)(2)......................	Performance test dates.	Yes............................	
63.7(a)(3)......................	Performance test requests by Administrator under CAA section 114.	Yes............................	
63.7(b)(1)......................	Notification of performance test.	Yes............................	
63.7(b)(2)......................	Notification of delay in conducting a scheduled performance test.	Yes............................	
63.7(c).........................	Quality assurance program.	Yes............................	
63.7(d).........................	Performance testing facilities.	Yes............................	
63.7(e).........................	Conduct of performance tests.	Yes............................	
63.7(f).........................	Use of an alternative test method.	Yes............................	
63.7(g).........................	Data analysis, recordkeeping, and reporting.	Yes............................	
63.7(h).........................	Waiver of performance tests.	Yes............................	§ 63.865(c)(1) specifies the only exemption from performance testing allowed under subpart MM.
63.8(a).........................	Monitoring requirements_applicability.	Yes............................	See § 63.864.
63.8(b).........................	Conduct of monitoring	Yes............................	See § 63.864.
63.8(c).........................	Operation and maintenance of CMS.	Yes............................	See § 63.864.
63.8(d).........................	Quality control program.	Yes............................	See § 63.864.
63.8(e)(1)......................	Performance evaluation of CMS.	Yes............................	
63.8(e)(2)......................	Notification of performance evaluation.	Yes............................	
63.8(e)(3)......................	Submission of site-specific performance	Yes............................	

	evaluation test plan.		
63.8(e)(4)	Conduct of performance evaluation and performance evaluation dates.	Yes	
63.8(e)(5)	Reporting performance evaluation results.	Yes	
63.8(f)	Use of an alternative monitoring method.	Yes	
63.8(g)	Reduction of monitoring data.	Yes	
63.9(a)	Notification requirements_applicability and general information.	Yes	
63.9(b)	Initial notifications	Yes	
63.9(c)	Request for extension of compliance.	Yes	
63.9(d)	Notification that source subject to special compliance requirements.	Yes	
63.9(e)	Notification of performance test.	Yes	
63.9(f)	Notification of opacity and VE observations.	Yes	Subpart MM does not contain any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.
63.9(g)(1)	Additional notification requirements for sources with CMS.	Yes	
63.9(g)(2)	Notification of compliance with opacity emissions standard.	Yes	Subpart MM does not contain any opacity or VE emissions standards; however, § 63.864 specifies opacity monitoring requirements.
63.9(g)(3)	Notification that criterion to continue use of alternative to relative accuracy testing has been exceeded.	Yes	
63.9(h)	Notification of compliance status.	Yes	
63.9(i)	Adjustment to time periods or postmark deadlines for submittal and review of required communications.	Yes	
63.9(j)	Change in information already provided.	Yes	
63.10(a)	Recordkeeping requirements_applica	Yes	See § 63.866.

	bility and general information.		
63.10(b)(1)	Records retention.	Yes	
63.10(b)(2)	Information and documentation to support notifications and demonstrate compliance.	Yes	
63.10(b)(3)	Records retention for sources not subject to relevant standard.	Yes	Applicability requirements are given in §63.860.
63.10(c)	Additional recordkeeping requirements for sources with CMS..	Yes	
63.10(d)(1)	General reporting requirements.	Yes	
63.10(d)(2)	Reporting results of performance tests.	Yes	
63.10(d)(3)	Reporting results of opacity or VE observations	Yes	Subpart MM does not include any opacity or VE standards; however, § 63.864 specifies opacity monitoring requirements.
63.10(d)(4)	Progress reports.	Yes	
63.10(d)(5)	Periodic and immediate startup, shutdown, and malfunction reports.	Yes	
63.10(e)	Additional reporting requirements for sources with CMS.	Yes	
63.10(f)	Waiver of recordkeeping and reporting requirements.	Yes	
63.11	Control device requirements for flares.	No	The use of flares to meet the standards in subpart MM is not anticipated.
63.12	State authority and delegations.	Yes	
63.13	Addresses of State air pollution control agencies and EPA Regional Offices.	Yes	
63.14	Incorporations by reference.	Yes	
63.15	Availability of information and confidentiality.	Yes	

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001]

APPENDIX H

(EPA Approval Letter for NESHAP Subpart MM Alterative Monitoring)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUN 0 1 2004

Kale Hanner, E.I.
Environmental Engineer
GBMc & Associates
2301 N. Highway 190
Suite 11
Covington, LA 70433

RE: 40 CFR Part 63, Subpart MM, Alternative Monitoring Proposal
Delta Natural Kraft
Pine Bluff, Arkansas

Dear Mr. Hanner:

This is in response to a letter from Mr. John Bailey, E.I, of GBMc & Associates, dated January 5, 2004, concerning the Delta Natural Kraft (Delta) pulp and paper mill in Pine Bluff, Arkansas. In his letter, Mr. Bailey requested the approval of an alternative monitoring plan in accordance with 40 CFR Part 63.8(f)(2)(i). Delta operates a kraft pulp and paper mill in Pine Bluff, Arkansas. This facility has a recovery boiler, which must meet the requirements of 40 CFR 63 Subpart MM - National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite and Stand-Alone Semichemical Pulp Mills. Delta specifically requests that the provisions for an alternative method to their Continuous Opacity Monitoring System (COMS) be approved, as explained below.

40 CFR Part 63.863 requires that the concentration of PM in the exhaust gases discharged to the atmosphere for each existing kraft recovery furnace is less than or equal to 0.10 g/dscm, corrected to 8% oxygen. Also, 40 CFR 63.894(d) requires that a COMS be installed on each affected kraft recovery furnace equipped with an ESP. Delta's recovery boiler is equipped with an ESP. However, the ESP is followed by a wet scrubber. The scrubber is designed and operated to remove TRS compounds from the recovery boiler exhaust after particulate removal by the ESP. The TRS scrubber also removes additional particulate from the ESP treated emission flow. The scrubber collects particles by saturating the dirty gas stream with liquid drops. The fine particles adhere to the liquid drops when contacted. Because the gas stream is saturated, a COMS, as required in 40 CFR 63.864(d), would not accurately measure the opacity from the source. Therefore, Delta requested that EPA grant relief from the condition requiring a COMS on the recovery boiler.

To demonstrate continuous compliance with the opacity standard, Delta proposes to monitor operational parameters to verify continuous and efficient operation of the scrubber and ESP. At the scrubber, this will be accomplished by continuously monitoring the pressure drop of the gas stream and the scrubbing liquid flow rate to the control device, as required by 40 CFR 63.864(e)(10). At the ESP, Delta proposes to monitor the voltage and the number of active fields. Operating ranges for both the scrubber and the ESP will be established during the initial performance test.

In previous requests of this nature, EPA has required, at a minimum, the monitoring of the secondary power to each field or cell in the ESP and the number of T/R fields that are operating. For an ESP with multiple fields (Delta's ESP has 4 fields), monitoring the total power alone is not an adequate indicator of the ESP performance. Continuously monitoring the secondary power to each field would indicate not only a change in ESP operation, but would also indicate where a problem may be. We understand that additional equipment will be purchased to enable Delta to monitor the secondary power to each field in the ESP. Therefore, at this time, the Delta request is conditionally approved. However, once the additional equipment is purchased and the performance test is conducted, we require Delta to submit a monitoring plan, based on the results of the initial performance test, which will include the corrective actions that will be taken if fields of the ESP are out of service.

If you have any questions regarding this approval, please contact Michelle Kelly of my staff, at (214) 665-7580.

Sincerely,

Michael Michaud
Acting Chief
Air Toxic and Inspection
Coordination Branch

cc: Alban Bush - Delta Natural Kraft
Tom Hudson, ADEQ
Anna Hubbard, ADEQ
Tom Rheaume, ADEQ

CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that a copy of this permit has been mailed by first class mail to Delta Natural Kraft, PO Box 20700, Pine Bluff, AR, 71611, on 2/20/08.

C Hook

Cynthia Hook, AAII, Air Division