RESPONSE TO COMMENTS

GREEN BAY PACKAGING INC. (ARKANSAS KRAFT DIVISION) PERMIT #0224-AOP-R15 AFIN: 15-00001

On May 8, 2013 the Director of the Arkansas Department of Environmental Quality gave notice of a draft permitting decision for the above referenced facility. During the comment period, written comments on the draft permitting decision were submitted by the facility. The Department's response to these issues follows.

Note: The following page numbers and condition numbers refer to the draft permit. These references may have changed in the final permit based on changes made during the comment period.

Comment #1: Specific Condition 149

40 CFR Part 63 Subpart S defines the standards under which an "excess emissions" event takes place. For SN-37 those events are defined in Specific Condition 148 and those are the events that are covered by the 1% emission allowance. The last sentence on SC 149 should read: These Upset Conditions are detailed in Specific Condition 148.

Response to Comment #1: The revision has been made.

Comment #2: Specific Condition 158

40 CFR Part Subpart S defines the standards under which an "excess emissions" events takes place. For SN-38 those events are defined in Specific Condition 157 and those are the events that are covered by the 4% emission allowance. The last sentence on SC 158 should read" These Upset Conditions are detailed in Specific Condition 157.

Response to Comment #2: The revision has been made.

Comment #3: In Source Description for SN-41, SN-42 and SN-43" ...SN-42 is a 207-hp, diesel fired, emergency <u>Recovery Elevator drive engine</u>...

Response to Comment #3: The change has been made.

Comment #4: Specific Condition 172

Minor changes in emissions for SN-42 and SN-43 are needed. Revised Calculation and Emission Rate Tables are attached for each source

SN-42 SO ₂ tpy	Change from 1.1 to 0.11
VOC lb/hr	Change from 0.1 to 0.5

SN-43 SO₂ tpy Change from 0.4 to 0.04

Response to Comment #4: The requested sources have been corrected for the respective pollutants. Emission limits for criteria pollutants are rounded up to the nearest tenth place. The permit has been revised as follows:

SN	Pollutant	lb/hr	tpy
42	SO ₂	0.5	0.2
	VOC	0.5	0.2
43	SO ₂	0.2	0.1

Comment #5: Specific Condition 173

Because of their small size and very limited emissions, these engines were not regulated by ADEQ. The only reason they are now being permitted is because they fall under a new MACT rule – Part 63, Subpart ZZZZ. To list emission limits as small as the ones in Specific Condition 173 seems to be going beyond regulatory necessity. Other than for PM, we request that the other limits in Specific Condition 173 be deemed insignificant and not list them in the permit.

Response to Comment #5: Each pollutant except PAH and Xylene listed in Specific Condition #173 has a facility-wide total emission rate above de minimis levels and therefore are reportable for each source. PAH and Xylene has been removed from the table. Inadvertently the Emission Summary Table on page 12 was not updated to include emissions from SN-41, SN-42, SN-43 has been updated to accurately list hourly and annual totals for each pollutant. The condition will remain unchanged.

Comment #6: Specific Condition 174, Specific Condition 177, Specific Condition 178 The sole reason for permitting these engines is to comply with 40 CFR Part 63, Subpart ZZZZ. In that regulation for small emergency use engines, there is no opacity limitation and no provision to monitor opacity. We request that, since these engines are being permitted under the MACT rule, the opacity provisions in the permit, Specific Conditions 174, 177 and 178 be removed.

Response to Comment #6: All part 70 permits (i.e. Title V permits) are required to have compliance certification, testing, monitoring, reporting, and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. The commenter did not provide any

other compliance mechanism for SN-41, SN-42 and SN-43. Therefore, the permit will remain as written.

Comment #7: Specific Condition 175

This condition sets an operation limit of 500 hours during any consecutive 12-month period. However, 40 CFR 63.6640(f)(2) specifies that the 100 hours allowed for maintenance activities is for a <u>calendar</u> year. We request that the recordkeeping required to demonstrate engine use be for a calendar year to correspond to the ZZZZ MACT requirement for maintenance hours.

Response to Comment #7: The change has been made.

Comment #8: Specific Condition 176

Compliance with the 500 hours of annual operation will have to be reported under GP-21 each year, especially if the hours are accumulated by calendar year. The number of hours of usage, unless there is an emergency use, will be small (typically one hour per week maximum) and fairly routine. We request that the requirement to report semi-annually, with the previous 12 months of data, under GP-7 be removed. Instead, we request that the following language – taken from another Title V permit (670-AOP-R4) be used:

The permittee shall maintain monthly and annual records to demonstrate compliance with Specific Condition #175. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. A twelve month calendar total and each individual month's data shall be in a spreadsheet, database, or other well-organized format, maintained on site, made available to Department personnel upon request and submitted in accordance with General Provision #21.

Response to Comment #8: The condition has been revised as requested.



Ken Brockway Corporate Environmental Manager Green Bay Packaging Inc. (Arkansas Kraft Division) 338 Highway 113 Morrilton, AR 72110

Dear Mr. Brockway:

The enclosed Permit No. 0224-AOP-R15 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 12/3/2012.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 0224-AOP-R15 for the construction, operation and maintenance of an air pollution control system for Green Bay Packaging Inc. (Arkansas Kraft Division) to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,

lilo Batto

Mike Bates Chief, Air Division

ADEQ OPERATING AIR PERMIT

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

Permit No.: 0224-AOP-R15

IS ISSUED TO:

Green Bay Packaging Inc. (Arkansas Kraft Division) 338 Highway 113 Morrilton, AR 72110 Conway County AFIN: 15-00001

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:

April 18, 2011 AND April 17, 2016

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

Signed:

Mike Bates Chief, Air Division

October 21, 2013

Date

SECTION I: FACILITY INFORMATION 5 SECTION II: NTRODUCTION 6 Summary of Permit Activity 6 Process Description 6 Regulations 11 Emission Summary 12 SECTION II: PERMIT HISTORY 21 SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-11 57 SN-12 58 SN-13 59 SN-14 57 SN-15 59 SN-16 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 77 SN-30 73 SN-31 75 SN-32 77 SN-34 79 SN-35 79 SN-36 78 SN-37 79 SN-38 85 SN-30 <	Table of Contents	
Summary of Permit Activity 6 Process Description 6 Regulations 11 Emission Summary 12 SECTION III: PERMIT HISTORY 21 SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-04 36 SN-05A 42 SN-07 47 SN-18 51 SN-11 51 SN-12 58 SN-15 59 SN-16 59 SN-17 63 SN-28 64 SN-24 66 SN-25B 64 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-31 75 SN-32 77 SN-34 79 S	SECTION I: FACILITY INFORMATION	5
Process Description 6 Regulations 11 Emission Summary 12 SECTION III: PERMIT HISTORY 21 SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-15 59 SN-16 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 64 SN-24 66 SN-25A 67 SN-25A 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-34 99 SN-31 75 SN-32 77 SN-34 99 SN-34 99 SN-37 78	SECTION II: INTRODUCTION	6
Process Description 6 Regulations 11 Emission Summary 12 SECTION III: PERMIT HISTORY 21 SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-15 59 SN-16 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 64 SN-24 66 SN-25A 67 SN-25A 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-34 99 SN-31 75 SN-32 77 SN-34 99 SN-34 99 SN-37 78	Summary of Permit Activity	6
Regulations 11 Emission Summary 12 SECTION III: PERMIT HISTORY 21 SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-13 59 SN-14 59 SN-15 59 SN-16 66 SN-23 64 SN-24 66 SN-25A 67 SN-25A 67 SN-25A 67 SN-25B 69 SN-32 77 SN-34 79 SN-35 79 SN-32 77 SN-34 99 SN-35 99 SN-31 75 SN-32 77 SN-33 <t< th=""><th></th><th></th></t<>		
Emission Summary 12 SECTION III: PERMIT HISTORY 21 SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-13 58 SN-14 58 SN-15 59 SN-16 58 SN-23 64 SN-24 66 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-34 99 SN-40 99 SN-41, SN-42, SN-43 99 SN-31 75 SN-32 77 SN-34 99 SN-41 99 SN-42 99 SN-43<		
SECTION III: PERMIT HISTORY 21 SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-13 59 SN-14 63 SN-23 64 SN-24 66 SN-25A 67 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-33 85 SN-34 99 SN-35 99 SN-36 78 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SN-44 99 SN-45 99 SN-34 99 SN-35 99 SN-36 99 SN-47 106 SN-48		
SECTION IV: SPECIFIC CONDITIONS 31 SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-13 59 SN-14 66 SN-25A 67 SN-25B 66 SN-25B 67 SN-30 73 SN-31 75 SN-32 77 SN-34 78 SN-35 79 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION VI: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: INSIGNIFICANT ACTIVITIES 106 Title VI Provisions 106 Permit Shield 107 SECTION VIII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: INSIGNIFICANT ACTIVITIE		
SN-01 31 SN-02 32 SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-13 59 SN-14 63 SN-23 64 SN-24 66 SN-25A 67 SN-25A 64 SN-24 66 SN-25A 64 SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-34 79 SN-35 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SN-40 98 SN-41 99 SN-40 98 SN-41, SN-42, SN-43 99 SN-40 98		
SN-02 32 SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-15 59 SN-16 63 SN-23 63 SN-24 66 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-34 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII INSIGNIFICANT ACTIVITIES 110 SECTION VIII INSIGNIFICANT ACTIVITIES 112 Appendix A – NSPS Subpart Db 112 <td></td> <td></td>		
SN-03 35 SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-15 59 SN-17 63 SN-24 66 SN-25A 67 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-34 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION VI: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: INSIGNIFICANT ACTIVITIES 110 SECTION VIII INSIGNIFICANT ACTIVITIES 110 SECTION VIII INSIGNIFICANT ACTIVITIES 111 Appendix A – NSPS Subpart Db 112		
SN-04 36 SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-15 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-36 78 SN-37 79 SN-38 85 SN-41, SN-42, SN-43 99 SECTION VI: PLANTWIDE CONDITIONS 106 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SPEOTION VII: INSIGNIFICANT ACTIVITIES 1112 Appendix A – NSPS Subpart Db 112		
SN-05A 42 SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-15 59 SN-17 63 SN-23 64 SN-24 66 SN-25B 69 SN-25B 69 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 99 SN-40 98 SN-41, SN-42, SN-43 99 SECTION VI: PLANTWIDE CONDITIONS 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: INSIGNIFICANT ACTIVITIES 112 Appendix A – NSPS Subpart Db 112		
SN-07 47 SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-13 59 SN-14 63 SN-25 64 SN-24 66 SN-25B 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-40 98 SN-41, SN-42, SN-43 99 SECTION VI: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: INSIGNIFICANT ACTIVITIES 112 Appendix A – NSPS Subpart Db 112		
SN-08 and SN-22 51 SN-11 57 SN-12 58 SN-15 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 67 SN-25B 69 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-34 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION V: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-11 57 SN-12 58 SN-15 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 67 SN-25B 69 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-40 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-12 58 SN-15 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 77 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-15 59 SN-17 63 SN-23 64 SN-24 66 SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-17 63 SN-23 64 SN-24 66 SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		-
SN-23 64 SN-24 66 SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-24 66 SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		-
SN-25A 67 SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-25B 69 SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-26 and SN-27 71 SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-30 73 SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-31 75 SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-32 77 SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-36 78 SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-37 79 SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-38 85 SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-39 91 SN-40 98 SN-41, SN-42, SN-43 99 SECTION V: COMPLIANCE PLAN AND SCHEDULE 104 SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112		
SN-4098SN-41, SN-42, SN-4399SECTION V: COMPLIANCE PLAN AND SCHEDULE104SECTION VI: PLANTWIDE CONDITIONS105Acid Rain (Title IV)106Title VI Provisions106Permit Shield107SECTION VII: INSIGNIFICANT ACTIVITIES110SECTION VIII: GENERAL PROVISIONS112Appendix A – NSPS Subpart Db105		
SN-41, SN-42, SN-4399SECTION V: COMPLIANCE PLAN AND SCHEDULE104SECTION VI: PLANTWIDE CONDITIONS105Acid Rain (Title IV)106Title VI Provisions106Permit Shield107SECTION VII: INSIGNIFICANT ACTIVITIES110SECTION VIII: GENERAL PROVISIONS112Appendix A – NSPS Subpart Db105		
SECTION V: COMPLIANCE PLAN AND SCHEDULE104SECTION VI: PLANTWIDE CONDITIONS105Acid Rain (Title IV)106Title VI Provisions106Permit Shield107SECTION VII: INSIGNIFICANT ACTIVITIES110SECTION VIII: GENERAL PROVISIONS112Appendix A – NSPS Subpart Db105	SN-40	98
SECTION VI: PLANTWIDE CONDITIONS 105 Acid Rain (Title IV) 106 Title VI Provisions 106 Permit Shield 107 SECTION VII: INSIGNIFICANT ACTIVITIES 110 SECTION VIII: GENERAL PROVISIONS 112 Appendix A – NSPS Subpart Db 112	SIN-41, SIN-42, SIN-45	99
Acid Rain (Title IV)106Title VI Provisions106Permit Shield107SECTION VII: INSIGNIFICANT ACTIVITIES110SECTION VIII: GENERAL PROVISIONS112Appendix A – NSPS Subpart Db112	SECTION V. DIANTWIDE CONDITIONS	104
Title VI Provisions	Acid Dain (Title IV)	.05
Permit Shield	Title VI Drovisiona	.06
SECTION VII: INSIGNIFICANT ACTIVITIES		
SECTION VIII: GENERAL PROVISIONS		.07
Appendix A – NSPS Subpart Db	SECTION VIII, CENEDAL DROVICIONC	.10
	Annendix A NSDS Subnest Dh	.12
	1	
Appendix C – NSPS Subpart RR		
Appendix C – NSI'S Subpart KK Appendix D – NSPS MACT S		

Appendix E – MACT MM Appendix F – CEM Standards Appendix G – NSPS ZZZZ

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
PM ₁₀	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO ₂	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Тру	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	Green Bay Packaging Inc. (Arkansas Kraft Division)
AFIN:	15-00001
PERMIT NUMBER:	0224-AOP-R15
FACILITY ADDRESS:	338 Highway 113 Morrilton, AR 72110
MAILING ADDRESS:	338 Highway 113 Morrilton, AR 72110
COUNTY:	Conway County
CONTACT NAME:	Ken Brockway
CONTACT POSITION:	Corporate Environmental Manager
TELEPHONE NUMBER:	501-354-9567
REVIEWING ENGINEER:	Kimberly O'Guinn
UTM North South (Y):	Zone 15: 3883770.60 m
UTM East West (X):	Zone 15: 523684.37 m

SECTION II: INTRODUCTION

Summary of Permit Activity

Green Bay Packaging, Inc.-Arkansas Kraft Division (AKD) of 338 Highway 113, Morrilton, Conway County, Arkansas 72110 has owned and operated a fully integrated kraft pulp and paper mill in Oppelo, near Morrilton, since 1965. This modification is to revise Specific Conditions #149 & #158 to remove language referencing the exclusion of SSM for SN-37, LVHC Collection System, and SN-38, HVLC Collection System, under 40 CFR 63 Subpart S due to recent final rule changes by EPA. Also this modification is to allow the addition of three emergency RICE engines to the permit under 40 CFR Part 60 Subpart ZZZZ (SN-41, SN-42, and SN-43).

Lastly the modification is to replace the headbox on the #2 Paper Machine (SN-25B). Since replacing the headbox is not a routine maintenance activity, evaluation of the emissions from the source for PSD applicability is required. The facility submitted a PSD evaluation which demonstrated replacing the headbox is less than the PSD significance level for VOC. Therefore, PSD permitting is not required at this time.

Permitted emissions rates will increase as follows: 0.4 tons/year (tpy) PM/PM₁₀, 1.6 tpy SO₂, 0.4 tpy VOC, 0.9 tpy CO, 3.5 tpy NOx and 0.048 tpy of total HAPs.

Process Description

Chip Handling System

Wood chips are brought into the mill and unloaded by hydraulic dump. The chips are then conveyed to the chip piles. The wood chips from the chip pile are reclaimed, sized, conditioned, and then conveyed to the batch digesters.

Digesting and Washing

Wood chips and sawdust are loaded into one of five batch digesters, along with an aqueous solution of sodium hydroxide and sodium sulfide (white liquor). Each loaded digester is then placed under high temperature and pressure using steam. The chipped wood is cooked to separate the wood fibers from the lignin that binds the fibers together. The cycle time for each batch is one to two hours. During cooking, some gases are vented into the turpentine recovery system which is described below.

Once the cooking time is complete, the resulting mixture is released (blown) to atmospheric pressure in blow tanks. The pressure reduction helps to separate the wood materials. Vent gases from the blow tanks are fed to the blow heat recovery system. The pulp and liquor mixture is then processed through fibrilizers to break up large particles.

After passing through the fibrilizers, the pulp is refined and screened. Rejects from the screening operation are returned to the rejects tanks, then to the blow tanks, and the remaining pulp is fed to the pulp washers.

The pulp is washed using counter current drum washers to remove organic and inorganic chemicals (black liquor); defoamers and CO_2 are also added. This is accomplished by introducing shower water in the last stage of washing. Filtrate from each drum gravity flows to a tank and is used on the prior stage as shower liquid. The recovered chemicals are pumped from the #1 seal tanks, filtered to remove fiber, and sent to weak liquor storage. Washed pulp is stored in the base Hi-D and top Hi-D tanks for use in the paper machine area.

Non-condensable gases are passed through the two control systems, LVHC (Low Volume High Concentration) and HVLC (High Volume Low Concentration). Pulping wood releases numerous HAP compounds that do not condense out in other processes. In the LVHC system, the non-condensable gases are conditioned in a white liquor scrubber and then combusted in the #2 Lime Kiln (SN-08) or the NCG Incinerator (SN-22).

The HVLC Collection System collects vapors from the brownstock washers, tanks associated with the washers, and the Condensate Collection Tank. It consists of hoods that cover the drums of the washers, lines from the hoods and tanks, a condenser to reduce moisture, a fan and a line into the incineration control device. The incineration occurs at the #3 Wood Waste Boiler (SN-04) and the #1 Wood Waste Boiler (SN-02) as a backup.

Blow Heat Recovery

Gases from the blow tanks pass to the primary separator to remove any entrained black liquor. The gases then enter the accumulator where they are cooled by recirculating water. The uncondensed vapor is passed to the secondary condenser. The remaining non-condensable gases (NCGs) are transported to the lime kiln for incineration. In the event that the NCGs can not be burned in the lime kiln, they are routed to the NCG flare for destruction.

The water in the accumulator is cooled by heat exchangers and returned to the accumulator. The cooling water for the heat exchangers is circulated through a cooling tower and then sent to the recycle fiber system or returned to the heat exchangers.

Black Liquor and Chemical Recovery

Black liquor containing sodium sulfate, organic and inorganic sulfur compounds, sodium hydroxide and lignin is pumped from weak black liquor storage to the evaporator train where the excess water is removed to increase the black liquor solids content. Black liquor entering the chemical recovery area contains approximately 13 percent solids and is evaporated to between 65 and 80 percent solids in a multiple effect evaporator train.

At the optimum point, tall oil soap is removed from the black liquor by a skimmer and pumped to the tall oil plant. A vacuum is created on the evaporators by surface condensers and the resulting warm water is sent to various areas throughout the plant. Under upset conditions, hogging jets are used to pull vacuum for the evaporators. The concentrated black liquor is stored in tanks and used as fuel for the recovery boiler.

In the recovery boiler, the concentrated black liquor is burned to create heat and steam for various plant processes. Inorganic salts fall to the floor of the furnace as a molten smelt. This smelt flows from the furnace and is combined with weak wash from the recausticizing area to form a mixture of sodium carbonate and sodium sulfide known as green liquor. The green liquor is pumped back to the recausticizing area.

Recausticizing and Lime Recovery

Green liquor from the chemical recovery operation is pumped to a blend tank and then to green liquor clarifiers. The clarifiers remove dregs from the green liquor. The dregs are stored in a storage tank before being washed and removed from the system. The green liquor is stored in green liquor storage tanks before being pumped to the slaker.

In the slaker, the green liquor is combined with fresh lime and/or reburned lime from the lime kiln to form a sodium hydroxide and calcium carbonate mixture. The mixture is transferred to the white liquor clarifiers where the lime mud precipitates. The white liquor is then stored in the white liquor storage tanks before being added to the digesters for the chip cooking process. Rejects from the system are washed and removed from the system.

The lime mud is removed from the white liquor clarifiers by underflow and sent to the mud washers. In the mud washers, the lime mud is washed with water and the resulting filtrate (weak wash) is sent to the weak wash storage tanks to be used for dissolving smelt to form green liquor. The washed lime mud is pumped to the lime mud storage tanks to be fed to the lime mud filter. After passing over the lime mud filter, the lime mud is conveyed into the lime kiln to be calcined to form quick lime. Lime from the lime kiln is stored in silos before being combined with green liquor in the slaker to form white liquor.

Turpentine Recovery Plant

Vent gases from the digesters enter a separator to remove entrained black liquor and moisture. Removed liquid is returned to the blow tanks and the gases pass to a condenser. From the condenser, the turpentine/water mixture flows to the turpentine decanter. Any non-condensable gases from the condenser are collected in the LVHC System and are transported to the lime kiln or flare for incineration. The turpentine/water mixture in the decanter separates, and the turpentine is removed for storage. The turpentine is loaded for shipment and the water is sent to the accumulator in the blow heat recovery system or burned in the #2 Lime Kiln (SN-08).

Tall Oil Plant

Tall oil soap from the black liquor recovery cycle is stored in soap storage tanks. The soap is then transferred to the reactor with water and mixed with acid and steam. The mixture is transferred to the decanters and tall oil and brine are allowed to separate. After separation, tall oil is stored in the crude tall oil storage tanks. The brine solution is pumped from the decanters to the #1 Brine Storage for pH adjustment, passed to the #2 Brine Storage, and pumped to the black liquor recovery system. The tall oil is pumped from the storage for shipment.

Boiler Complex

Steam is generated using several boilers. The recovery boiler has already been described as using spent cooking liquor as its primary fuel source and natural gas for backup fuel. The power boiler use natural gas as its primary fuel with fuel oil for backup fuel. The wood waste boilers use wood waste as the primary fuel and natural gas as the backup fuel. Wood waste is delivered by truck to the mill and unloaded by hydraulic dump onto a wood waste pile. The wood waste is reclaimed from the wood waste pile by conveyor and transported to the wood waste boilers.

Paper Machines

Virgin pulp fiber that has been pulped and washed to remove cooking liquors, is stored. Pulp is transferred from storage to the level chest. The first stage of refining takes place between the level chest and the machine chest. In the machine chest, fan pump, or head box, the pulp may be mixed with various recycled fibers and additives that aid in the manufacture of paper, to form the furnish for the paper machine. The resulting furnish is pumped from the machine chest, through a second stage of refining and to the head box. The head box delivers the dilute furnish on to an endless moving mesh fabric. Excess water is removed from the furnish as it travels with the moving fabric.

A second furnish is created by using either virgin or recycled pulp. Either virgin pulp from storage or recycled pulp is transferred to the level chest. After the level chest, the pulp is refined and conveyed to the machine chest. From the machine chest the furnish is refined a second time and transferred into the secondary head box. Final dilution of the furnish is applied prior to delivery by the secondary head box onto the traveling mesh fabric. Excess water is removed.

As the water is removed from the traveling fabric, the fibers of the furnish are formed into a cohesive web. The web is pressed between rollers. Following the pressing operation, the web is dried by passing over metal vessels heated with steam. After drying is complete, the dry web of paper is wound into a large parent roll, cut to order, and shipped. The paper mill generates several grades of paper from the two paper machines.

Water that has been removed from the furnish is recycled into the process for reuse on the paper machine, and/or sent to the recycling area, and/or sewered. Excess water from the paper mill is discharged to the wastewater treatment system.

Recycling Area

Post consumer recycle material in the form of cardboard, newspaper, printers waste, and office waste are mixed with water to produce a slurry of paper fiber, contaminants, and water in the pulpers of the recycling plants. After slurrying, the pulp is diluted prior to the screening and cleaning operations. Cleaned pulp is thickened prior to storage. Water removed from the pulp during thickening is cleaned and recycled into the process or sewered to the wastewater treatment system.

Thickened pulp is stored in one of the two high density storage chests for transport to the paper machines. Contaminants removed from the pulp stream are put into the mill waste water system. The recycling area generates several types of pulp furnish for the paper machines.

Water Treatment

Water from the Arkansas River is used for mill water supply. Water purchased from Conway County Regional Water Distribution District is used for steam generation in the boilers. The river water is placed in a settling clarifier with polymers and other water clarification aids to assist in settling solids. Disinfection is controlled by the addition of sodium hypochlorite or other disinfectants to the water. The purchased water is processed through demineralizer units.

Liquid urea and phosphoric acid can be added to the waste water to increase the biological development in the aerated settling basin and the hydrographic control basin/post aeration basin.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective June 18, 2010
Regulations of the Arkansas Plan of Implementation for Air Pollution Control,
Regulation 19, effective November 18, 2012 Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective November 18, 2012
40 CFR 60, Subpart Db, New Source Performance Standards for Industrial Steam Generating Units, effective December 16, 1987
40 CFR 60, Subpart BB, New Source Performance Standards for Kraft Pulp Mills, effective May 20, 1986
40 CFR 61, Subpart M, National Emission Standard for Hazardous Air Pollutants for Renovation/Demolition of Asbestos
40 CFR 63, Subpart S, National Emission Standard for Hazardous Air Pollutants from the Pulp and Paper Industry, effective April 15, 1998
40 CFR 63, Subpart MM, National Emission Standard for Hazardous Air Pollutants for Chemical Recovery Combustion Units at Kraft Pulp Mills with a compliance date of 3/12/04.
40 CFR 63, Subpart RR, National Emission Standards for Individual Drain Systems, effective July 1, 1996
40 CFR Part 53, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR 64, Compliance Assurance Monitoring, effective October 22, 1997

This facility is classified as a major source of greenhouse gas emissions.

Emission Summary

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				
Source	Description	Pollutant	Emiss	sion Rates
Number	Description	Ponutant	lb/hr	tpy
		PM	554.2	1027.9
		PM ₁₀	313.9	636.4
		SO ₂	126.7	267.5
Tot	al Allowable Emissions	VOC	468.8	1348.1
		СО	1341.2	1394.2
		NO _X	311.8	990.0
		Lead	0.06	0.27
* = Not ;	HAPs included in VOC or PM total	Acetaldehyde Acrolein Benzene Biphenyl 1,3 Butadiene Formaldehyde Hexane Hydrogen Chloride* Manganese Methanol Methyl Isobutyl Ketone Methylene Chloride Napthalene Phenol Proprionaldehyde Styrene Tetrachloroethylene Toluene 1,2,4 Trichlorobenzene Trichloroethylene m,p Xylene	$\begin{array}{c} 12.35\\ 2.79\\ 2.69\\ 0.11\\ 0.0001\\ 3.16\\ 0.36\\ 14.65\\ 0.98\\ 84.61\\ 0.19\\ 0.03\\ 0.23\\ 0.16\\ 0.03\\ 1.28\\ 0.03\\ 0.77\\ 0.04\\ 0.28\\ 0.13\\ \end{array}$	$\begin{array}{c} 44.19\\ 11.88\\ 11.67\\ 0.35\\ 0.0005\\ 13.67\\ 1.58\\ 63.17\\ 4.30\\ 247.48\\ 0.63\\ 0.11\\ 0.87\\ 0.31\\ 0.12\\ 5.47\\ 0.11\\ 3.12\\ 0.17\\ 0.97\\ 0.43\end{array}$

EMISSION SUMMARY				
Source Description		Pollutant	Emission Rates	
Number	Description	Tonutant	lb/hr	tpy
		Acetone*	3.44	8.30
		Butane	0.42	1.85
		Ammonia*	11.34	44.97
		Ethane	0.62	2.73
	Air Contaminants *	Methane	160.19	701.62
* = Not i	included in VOC or PM total	Pentane	0.52	2.29
		Propane	0.32	1.41
		Propylene	0.008	0.035
		Sulfuric Acid*	1.08	4.38
		TRS	66.91	203.51
01	Wood Waste Dryer	Removed From Service		
		PM	372.0	420.0
		PM ₁₀	191.0	215.0
		PM 372.0 42 PM ₁₀ 191.0 21 SO ₂ 4.1 1	18.0	
		VOC	116.0	15.0
		CO	956.5	326.0
		NO _X	57.0	15.0
		Lead	0.01	0.03
00	#1 We ad We de Deller	Acetaldehyde	0.13	0.59
02	#1 Wood Waste Boiler	Acetone	0.03	0.13
		Acrolein	0.65	2.84
		Benzene	0.68	2.98
		Formaldehyde	0.71	3.12
		Hydrogen Chloride	3.08	13.50
		Manganese	0.26	1.14
		Styrene	0.31	1.35
		Toluene	0.15	0.65
03	#2 Wood Waste Boiler	Removed From Service		

EMISSION SUMMARY				
Source	Decorintion	Pollutant	Emission Rates	
Number	Description	Ponutant	lb/hr	tpy
04	#3 Wood Waste Boiler	PM PM ₁₀ SO ₂ VOC CO NO _X Lead Acetaldehyde Acetone Acrolein Benzene Formaldehyde Hydrogen Chloride Manganese Napthalene Propionaldehyde Styrene	$\begin{array}{c} 45.2 \\ 45.2 \\ 9.6 \\ 22.5 \\ 135.6 \\ 135.6 \\ 0.02 \\ 0.38 \\ 0.09 \\ 1.81 \\ 1.90 \\ 1.99 \\ 8.59 \\ 0.72 \\ 0.04 \\ 0.03 \\ 0.86 \end{array}$	$ \begin{array}{r} 145.0 \\ 145.0 \\ 42.0 \\ 40.0 \\ 290.0 \\ 593.9 \\ 0.10 \\ 1.64 \\ 0.38 \\ 7.92 \\ 8.32 \\ 8.71 \\ 37.62 \\ 3.16 \\ 0.20 \\ 0.12 \\ 3.76 \\ \end{array} $
05A	Recovery Boiler East/West Stacks (Previously SN-05 and SN- 06)	ToluenePMPM10SO2VOCCONOXLeadBenzeneFomaldehydeHydrogen ChlorideMethanolMethylene ChlorideTetrachloroethyleneSulfuric Acid1,2,4-TrichlorobenzeneTRS	$\begin{array}{c} 0.42\\ \hline 30.0\\ 12.0\\ 60.0\\ 10.0\\ 223.1\\ 80.0\\ 0.01\\ 0.04\\ 0.26\\ 2.98\\ 2.38\\ 0.03\\ 0.03\\ 1.08\\ 0.04\\ 33.81\\ \end{array}$	$\begin{array}{c} 1.82\\ 93.2\\ 38.0\\ 157.9\\ 19.7\\ 674.8\\ 280.6\\ 0.10\\ 0.14\\ 1.05\\ 12.05\\ 9.64\\ 0.11\\ 0.11\\ 4.38\\ 0.17\\ 148.10\end{array}$

	EMISSI	ON SUMMARY		
Source	Description	Pollutant	Emiss	ion Rates
Number			lb/hr	tpy
		PM	8.9	35.7
		PM_{10}	8.9	35.7
		SO_2	0.3	1.1
		VOC	0.6	2.2
		NO_X	1.1	4.4
07	Smelt Dissolving Tank Vent	Lead	0.01	0.02
		Formaldehyde	0.19	0.77
		Methanol	0.50	2.04
		Naphthalene	0.03	0.11
		Ammonia	6.50 26.28	26.28
		TRS	1.82	7.36
		PM	35.2	154.2
		PM_{10}	35.2	154.2
			15.0	
		VOC	0.3	15.0
08	#2 Lime Kiln	CO	4.5	21.3
08	#2 Linie Kill	NO _X	8.4	45.0
		Lead 0.01	0.02	
		Methanol	0.96	0.34
		Naphthalene	0.16	0.55
		TRS	6.43	28.15
9	#1 Lime Kiln	Removed	From Service	
10	NCG Emergency Vent	Removed	From Service	
11	Brownstock Washers	Emissions F	Routed to SN-	04
	<u> </u>	VOC	19.3	72.9
12	Wastewater Treatment	Acetaldehyde	2.05	7.76
		Methanol	17.22	65.16
13	#1 Slaker	Removed From Service		
14	#1 Package Boiler	Removed From Service		

EMISSION SUMMARY				
Source	D			ion Rates
Number	Description	Pollutant	lb/hr	tpy
		PM	1.6	6.7
		PM_{10}	1.6	6.7
		SO_2	1.5	6.6
		VOC	1.2	4.9
		CO	16.9	74.0
1.5	//2 Doubles of Doillon	NO _X	13.8	39.0
15	#2 Package Boiler	Butane	0.42	1.85
1		Ethane	0.62	2.73
		Hexane	0.36	1.58
		Methane	0.46	2.02
		Pentane	0.52	2.29
		Propane	0.32	1.41
16	Dian Heat Emergency Vent	Emergen	cy Use Only.	
16	Blow Heat Emergency Vent	Not a	a Source.	
	Tall Oil Plant Reactor	VOC	5.9	15.0
		Acetone	0.12	0.17
17		Methanol	0.47	0.70
		Phenol	0.10	0.14
		TRS	0.21	0.30
18	#1 Lime Silo (Sodium Carbonate)	Moved to Insig	gnificant Acti	vities
19	#2 Lime Silo	Moved to Insig	gnificant Acti	vities
20	Starch Silo	Moved to Insig	gnificant Acti	vities
21	Lime Silo-Water Plant	Moved to Insig	gnificant Acti	vities
22	NCG Flare	SO ₂	49.1	26.3
		VOC	1.9	15.0
23	Botoh Dissectors	Acetaldehyde	0.04	0.15
23	Batch Digesters	Methanol	0.77	2.83
		TRS	0.32	9.0
		PM	1.6	2.2
24	Wood Yard Fugitives	PM_{10}	0.8	1.0
		VOC	202.5	887.0

EMISSION SUMMARY				
Source	Description	Pollutant	Emission Rates	
Number		Tonutant	lb/hr	tpy
		VOC Acetone	31.4 0.90	110.0 3.20
		Acetaldehyde Acrolein	4.99 0.18	17.46 0.59
		Benzene Biphenyl	0.03 0.06	0.11 0.20
25A	#1 Paper Machine	Methanol Methyl Isobutyl Ketone	25.57 0.10	89.47 0.33
		Phenol Styrene Toluene	0.03 0.06	0.10 0.19 0.25
		Trichloroethylene	Toluene 0.10 0.35 ichloroethylene 0.15 0.51 m,p Xylene 0.07 0.23 o Xylene 0.06 0.20 VOC 26.2 83.7	0.51
		o Xylene		0.20
		Acetone	0.74	83.7 2.58 14.29
		Acctolic0.74Acetaldehyde4.16Acrolein0.15Benzene0.03	0.15	0.52 0.10
25 B	#2 Paper Machine	Biphenyl Methanol	0.05 21.31	0.15 73.25
25 D		Methyl Isobutyl Ketone Phenol	0.09 0.03	0.30 0.07
		Styrene Toluene	0.05 0.09	0.17 0.29
		Trichloroethylene m,p Xylene o Xylene	0.13 0.06 0.05	0.46 0.20 0.18
		PM PM ₁₀	0.1 0.1	0.4 0.4
26	Basement Air Make-up Heater #1	SO ₂ VOC CO	0.1 0.1 0.8	0.1 0.3 3.6
		NO _X PM	<u> </u>	4.3 0.4
27	Basement Air Make-up	PM ₁₀ SO ₂	0.1 0.1	0.4 0.1
_,	Heater #2	VOC CO NO _X	0.1 0.8 1.0	0.3 3.6 4.3

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
28	Pocket Vent System Heater #1	Moved to Insignificant Activities		
29	Pocket Vent System Heater #2	Moved to Insignificant Activities		
30	Landfill	VOC Methane	1.9 159.73	8.3 699.60
31	Weak Black Liquor Tanks	VOC Acetone TRS	3.5 0.07 0.44	15.4 0.28 1.93
32	Green Liquor Tanks	VOC Acetone TRS	8.3 0.08 0.26	34.2 0.34 1.14
33	Small Fuel Oil Storage Tanks	Moved to Insignificant Activities		
34	Turpentine Storage Tanks	Moved to Insignificant Activities		
35	Turpentine Loading Operation	Moved to Insignificant Activities		
36	Slaker/Causticizers	VOC Acetaldehyde Acetone Ammonia Methanol	1.2 0.59 0.21 4.84 0.59	7.0 2.29 0.82 18.69 2.27
37	LVHC Collection System	VOC Methanol TRS	12.9 12.92 4.90	1.1 1.13 0.43
38	HVLC Collection System	VOC Acetone Methanol TRS	1.9 1.20 1.92 18.72	0.7 0.40 0.65 7.10
39	Pulping Process Condensate Collection	Recycled To SN-11 as Shower Water		
40	Mill Roads	PM PM ₁₀	58.4 17.9	169.7 39.6

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
41	Emergency Fire Water Pump	PM PM ₁₀ SO ₂ VOC CO NO _X Acetaldehyde Acrolein	0.4 0.4 0.4 1.1 5.0 8.59E-04	0.1 0.1 0.1 0.1 0.3 1.3 3.76E-03 4.54E 04
	Engine	Benzene 1,3 Butadiene Formaldehyde Naphthalene Propylene Toluene	1.04E-04 1.04E-03 4.38E-05 1.32E-03 9.50E-05 2.89E-03 4.58E-04	4.54E-04 4.58E-03 1.92E-04 5.79E-03 4.16E-04 1.27E-02 2.01E-03
42	Emergency Feed Water Pump Engine	PM PM ₁₀ SO ₂ VOC CO NO _X Acetaldehyde Acrolein Benzene 1,3 Butadiene Formaldehyde Naphthalene Propylene Toluene	0.5 0.5 0.5 0.5 1.4 6.5 1.11E-03 1.34E-04 1.35E-03 5.67E-05 1.71E-03 1.23E-04 3.74E-03 5.93E-04	0.2 0.2 0.2 0.4 1.6 4.87E-03 5.87E-04 5.92E-03 2.48E-04 7.49E-03 5.38E-04 1.64E-02 2.60E-03

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
	Emergency Lime Kiln Drive Engine	PM	0.2	0.1
		PM_{10}	0.2	0.1
		SO_2	0.2	0.1
		VOC	0.2	0.1
		CO	0.5	0.2
		NO _X	2.4	0.6
43		Acetaldehyde	4.03E-04	1.76E-03
43		Acrolein	4.86E-05	2.13E-04
		Benzene	4.90E-04	2.15E-03
		1,3 Butadiene	2.05E-05	8.99E-05
		Formaldehyde	6.20E-04	2.71E-03
		Naphthalene	4.45E-05	1.95E-04
		Propylene	1.35E-03	5.93E-03
		Toluene	2.15E-04	9.40E-04

SECTION III: PERMIT HISTORY

Arkansas Kraft began operations in October 1966, producing 230 tons of linerboard a day.

Air Permit #147-A was issued to Arkansas Kraft Corporation on March 28, 1973. It was issued to replace two existing boilers with a power boiler. The input of fossil fuel was limited to 249 million Btu/hr.

Air Permit #224-A was issued to Arkansas Kraft Corporation in 1973. It was issued to increase pulp capacity from 360 tons per day to 720 tons per day. New equipment added was: two digesters, additional vacuum filters for pulp washing, additional evaporators, a low-odor recovery boiler, a bark boiler, and a lime kiln. The recovery boiler was added to replace the existing unit. Existing control equipment was: an electrostatic precipitator to control recovery boiler emissions, two flash arresters to control bark boiler emissions, and a wet scrubber to control lime kiln emissions. A new thermal combustion system to control sulfur gas emissions from evaporator NCGs and Turpentine condenser vents.

Air Permit #443-A was issued to Arkansas Kraft, Inc. on November 18, 1977. It was issued to rerate the existing #1 bark boiler from 55,000 to 86,000 lbs/hr steam to utilize more wood waste as fuel and to reduce fossil fuel requirements.

Air Permit #224-A (Modification) was issued to Arkansas Kraft Corporation on October 13, 1978. It was issued to allow the facility to place the #1 Recovery Boiler back into service.

Air Permit #224-A (Modification) was issued to Arkansas Kraft Corporation on November 29, 1979. It was issued to permit the installation and operation of a wood waste fuel drying system.

Air Permit #224-A (Modification) was issued to Arkansas Kraft Corporation on October 31, 1980. It was issued to allow the facility to vent the flue gas from the #1 and #2 bark boilers through the bark boilers and a bark dryer.

Air Permit #224-AR-4 was issued to Arkansas Kraft Corporation in 1983. It was issued to permit the burning of fines in the #3 Wood Waste Boiler and to place the emissions under the existing "bubble" for the #3 Wood Waste Boiler, the #1 and #2 Bark Boilers, and the Wood Waste Dryer. The emission limit was 285 lbs PM/hr.

Air Permit #224-AR-5 was issued to Arkansas Kraft Corporation in 1984. It was issued to permit a gas fired turbine generator. The emission limit for this permit was 130 lbs NO_X/hr . The gas fired turbine generator was never constructed.

Consolidated Air Permit #224-AR-5 was issued to Green Bay Packaging, Inc.-Arkansas Kraft Division on June 8, 1994. It was issued to consolidate air permits #147-A, #224-AR-4, and #443-A into a single permit and to permit existing sources which were omitted from previous air permits. Modifications permitted were: the installation of a #2 Package Boiler, rebuilding of the #3 Wood Waste Boiler, replacement of the #1 and #2 Wood Waste Boilers with a new #4 Wood Waste Boiler, installation of a condensate stripper, installation of a coloring and bleaching system, installation of a tall oil plant scrubber, rebuilding of electrostatic precipitator, installation of a paper coating process, installation of a distributive control system, and rebuilding of the #2 Digester. Emission limits for this permit were: 2,893.8 tpy PM₁₀, 2,496.5 tpy SO₂, 1,861.1 tpy VOC, 11,852.2 tpy CO, 1,660.1 tpy NO_x, and 223.4 tpy TRS.

Of the permitted modifications at the facility under the June 8, 1994 permit, only the installation of the #2 Package Boiler, rebuilding of the #2 Digester, and partial installation of the Distributive Control System occurred.

Air Permit #224-AOP-R0 was the first operating air permit issued to Green Bay Packaging, Inc., Arkansas Kraft Division under Regulation #26. This permit was also the first Prevention of Significant Deterioration (PSD) permit for Green Bay Packaging. In a previous permit, Permit #224-AR-5, the facility was permitted to install a #2 Package Boiler at a maximum rate of 202 MMBTU/hr. A PSD permit was not required at that time because the emissions increase for the boiler were to be offset by the decreases from the rebuilding the #3 Wood Waste Boiler and the replacement of the #1 and #2 Wood Waste Boilers with a new boiler (#4 Wood Waste Boiler). The facility had accepted federally enforceable permit conditions to stay out of PSD requirements.

The facility is considered a major stationary source under the Prevention of Significant Deterioration (PSD) regulations as found in 40 CFR 52.21. As described below and throughout the permit, the facility is subject to PSD requirements. The facility triggered PSD for NO_X only. As the facility installed a 205 MMBTU/hr #2 Package Boiler and the removal of the #1 and #2 Wood Waste Boilers, the addition of the #4 Wood Waste Boiler, and the rebuilding of the #3 Wood Waste Boiler did not take place as previously permitted, the addition of the #2 Package Boiler has retroactively triggered PSD for NO_X.

This PSD issue was reviewed in Permit #224-AOP-R0. BACT for the #2 Package Boiler was determined to be low NO_X burners in conjunction with flue gas recirculation at 0.067 lb $NO_X/MMBTU$. The facility did not remove the #2 Wood Waste Boiler as permitted in Permit #224-AR-5; therefore, these emissions decreases were available to be used in permit #224-AOP-R0. For this permitting action, the facility chose to take a federally enforceable limit on SO_2 in order to avoid further PSD requirements.

An air dispersion modeling analysis was performed to determine if the modification at the AKD Mill would impact ambient air quality in the vicinity of the Upper Buffalo. The U.S. EPA established special PSD increment values for Class I areas for three of the criteria pollutants (PM₁₀, SO₂, and NOx). Prior to completing a PSD increment analysis; however, impacts due to increased emissions from the AKD Mill were assessed against a modeling significance level established by the U. S. EPA for Class I Areas (1.0 mg/m3, 24-hour average concentration for all pollutants). Under U. S. EPA guidance, if the results of the initial modeling analysis predict an increase in the 24-hour average pollutant concentration that exceed the 1.0 mg/m3 significance level, further analysis was warranted.

The Industrial Source Complex Short-Term Version 3 (ISCST3) model was utilized to estimate pollutant concentrations in the Upper Buffalo area. The modeling methodologies employed conform to those used in the PSD Air Quality Analysis.

A discrete receptor was placed at UMT coordinates 460.935 km East and 3919.979 km North in order to conservatively estimate pollutant concentrations throughout the area. (At the time it was thought that these coordinates were at the center of the Upper Buffalo Wilderness Area. In fact the Upper Buffalo is 34 km further away.) The receptor elevation was estimated to be 350 feet, based on a United States Geological Survey (USGS) topographical map (Russellville, Arkansas quadrangle).

The incremental 24-hour average impact was less than the 1.0 mg/m3 Class I Modeling Significance Level. Thus, no further dispersion modeling analysis to evaluate impacts in the Upper Buffalo area was warranted.

At that time, there were no PSD increment consuming sources located within the AKD Mill's ROI. Therefore, there were no sources other than those at the AKD Mill included in the PSD increment analysis. Because only sources at the AKD Mill were considered in the increment analysis, the methodology and results are identical to those of the significance analysis. All annual average concentrations were below the annual PSD Increment. Thus, compliance with this requirement was demonstrated.

This artificial limit allowed individual pieces of equipment to be run at differing capacities depending upon the needs of the facility. Emission increases at individual pieces of equipment were to be offset elsewhere in the complex by decreasing emissions at a different piece of equipment. As the complex was created for the purpose of keeping the #3 Wood Waste Boiler and #2 Package Boiler below the significance level in the previous permit and these boilers underwent PSD review in this permit, the significance of the Complex was discounted and then removed in this permitting action.

The combined net emissions NO_X increase for the #3 Wood Waste Boiler and the #2 Package Boiler was 71.6 tpy. BACT for the #2 Package Boiler was determined to be low NO_X burners in conjunction with flue gas recirculation. BACT for the #3 Wood Waste Boiler was determined to be low NO_X burners in conjunction with flue gas recirculation. Flue gas recirculation in #3 Wood Waste Boiler was demonstrated, under controlled conditions, to provide little or no NO_X reduction. Operating experience and CEM results have shown that the NO_X emission limit was met consistently. Operation of FGR is not a NO_X control technology required for #3 Wood Waste Boiler as of the renewal of Permit #224-AOP-R2. For this permitting action, the facility took a limit on SO_2 emissions for the two boilers in order to avoid further PSD applicability.

The PSD analysis for SO₂ based upon the following.

Proposed Modification Increases:				
SN-04	#3 Wood Waste Boiler	+27.0 tpy SO ₂		
SN-15	#2 Package Boiler	+ 0.6 tpy SO ₂		
		+27.6 tpy SO ₂		

PSD permits require an ambient impact analysis. Results of the analysis indicated that increased emissions of NOx resulted in ambient concentrations that exceed the applicable Modeling Significance Level. Therefore, a full impact analysis consisting of a NAAQS analysis and a PSD increment analysis was performed for NOx. The NOx significance output data files were examined to determine the furthest receptor from the AKD Mill with a modeled concentration greater than the 1.0 ug/m3 NOx MSL. This receptor was located 8.18 km from the center of the AKD Mill. Thus, the NOx radius of impact (ROI) was 8.18 km.

Permit #224-AOP-R1 was a modification to the first Title V operating permit. In this permitting action, as required by 40 CFR Part 63, Subpart S, a Low Volume High Concentration System (SN-37) and a High Volume Low Concentration System (SN-38) were installed. The increases in facility-wide particulate, sulfur dioxide, and VOC limits were due to calculation error in the last permit. Additionally, a requirement was being added to the #1 Wood Waste Boiler (SN-02) that required Green Bay Packaging to only burn natural gas at this source until a wet scrubber is installed to control particulate emissions. An administrative amendment was submitted on October 12, 2000 that added the Large Fuel Oil Tank to the list of insignificant activities. The tank was installed prior to 1979 so it was not subject to NSPS Subpart Kb and emits only 0.23 tons per year so it met the 5 ton per year requirement under Group A, Number 13 in the activities list.

Permit #224-AOP-R2 was issued on May 13, 2002. This modification defined averaging times for monitoring requirements, lowered permitted annual emissions on most equipment by removing the unneeded safety factors the facility requested in previous applications, allowed wood waste to be burned in the existing #1 Wood Waste Boiler (SN-02) during part of the year, changed control equipment on the Smelt Dissolving Tank Vent (SN-07) from demister pads to a scrubber, and separated the emissions of the #1 and #2 Paper Machines (SN-25A and SN-25B) to prevent future PSD issues.

In the original Title V permit application, Green Bay requested a grouping of the paper machines to provide for ease of record keeping. The potential limit was based on the sum of the very best operating day achieved on each machine extrapolated to a year of operation with a safety factor added. This resulted in a very high level of potential emissions for the source. Any modification to the machines would result in an emissions increase of over 40 tons per year of VOC when calculated by subtracting actual emissions from potential emissions. This modification established a federally enforceable production limit on each paper machine that was closer to actual production rates. This would allow for a future modification to replace the headbox on the #1 Paper Machine (SN-25A).

Permit 224-AOP-R3 was issued to Green Bay Packaging, Inc. – Arkansas Kraft Division on August 24, 2004. This modification was to:

- 1. Correct emission factors for the Wastewater Treatment (SN-12) and the Landfill (SN-30),
- 2. Clarify stack testing conditions by removing NO_X testing requirements from SN-04 because it has a NO_X CEM,
- 3. Increase steam production in the #1 Package Boiler (SN-14) by increasing the permitted limit. This limit was put on the boiler to lower the actual/potential ratio in regards to PSD. There was no physical change to the boiler,
- 4. Replace the headbox on the #1 Paper Machine (SN-25A),
- 5. Replace the ESP for the Recovery Boiler (SN-05 and SN-06) with a new ESP (SN-05A) to meet the future MACT MM efficiency requirements,
- 6. Add the Pocket Vent System Heater #1, the Pocket Vent Heater #2, and the Small Fuel Oil Tanks (SN-33) to the Insignificant Activities Section, and
- 7. Remove the flue gas recirculation equipment on the #3 Wood Waste Boiler (SN-04). When BACT was originally applied to this source, FGR was thought to lower NO_X emissions in conjunction with low NO_X burners. Testing demonstrated that emissions were not changed by discontinuing use of the fan. This altered a previous BACT determination.

This modification was also the Title V permit renewal.

Permit 0224-AOP-R4 was issued to Green Bay Packaging Inc., Arkansas Kraft Division on July 1, 2005. This modification allowed for the addition of applicable conditions 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 for sources SN-05, SN-07, and SN-08. The #1 Lime Kiln (SN-09) was removed from service. Recycled sanitary products were added to the list of approved fuels for the Wood Waste Boilers (SN-02 and SN-04). Finally, this modification updated the PM₁₀ testing methods for the #3 Wood Waste Boiler (SN-04).

Permit 0224-AOP-R5 was issued to Green Bay Packaging Inc. – Arkansas Kraft Division on October 21, 2005. This modification corrected TRS emission limits on the Recovery Boiler (SN-05A) and the #2 Lime Kiln (SN-08). The limits were a restoration of limits that were previously assigned to these sources. The limits were changed in a previous permit based on information supplied by AKD for other purposes. There were no physical changes to the facility.

Permit 0224-AOP-R6 was issued to Green Bay Packaging Inc. – Arkansas Kraft Division on March 15, 2006. This modification clarified inclusion of CO_2 and O_2 diluent CEMS at the #3 Wood Waste Boiler (SN-04), the #2 Lime Kiln (SN-08), and the #2 Package Boiler (SN-15). In addition, the following changes were made:

- 1. Modification of PM/PM₁₀ emissions limit for the #2 Lime Kiln (SN-08) based on testing and past data. Before the Title V permit, the emissions were 124.4 tpy, but using AP-42 and NCASI factors, the limit was reduced to 88.0 tpy. Based on stack testing, these factors give a poor estimate of the actual emissions. This modification used stack testing data to give a better estimate of the actuals. There were no physical changes or process increases to account for the increase.
- 2. Removal of restrictions for burning bark in the #1 Wood Waste Boiler (SN-02). Operating methods for burning wood waste had changed so that the boiler could be successfully operated below the 40% opacity limit. The requirements to install a scrubber, the limitation to burn only during November through March, and the condition allowing greater than 40% opacity during grate cleaning were removed from the permit.
- 3. Specification of an alternate method for SO₂ testing. Specific Conditions #17, #43, and #100 in the previous permit specified using Method 6 for SO₂ annual stack testing. This modification changed that method to Method 6C.
- 4. Recordkeeping requirements for Black Liquor Solids (BLS) combustion at the Recovery Boiler (SN-05A) and the Smelt Dissolving Tank (SN-07). The wording was potentially confusing and the condition that clarified what was being measured.
- 5. Modification of source testing schedule. Plantwide Condition #8 allowed for the permittee to reduce stack testing from annual testing to once every 5 years if the facility demonstrated compliance with two consecutive stack tests. This modification changed stack testing from annual to once every 5 years for the #1 Wood Waste Boiler (SN-02), the #3 Wood Waste Boiler (SN-04), the Recovery Boiler (SN-05A) and the #1 Package Boiler (SN-14).

Permit 224-AOP-R7 was issued to Green Bay Packaging, Inc. – Arkansas Kraft Division on May 18, 2006. This minor modification application allowed for burning of Tall Oil in the #2 Lime Kiln (SN-08). To make this change, Green Bay installed a new burner in the Lime Kiln and some piping and mechanical changes to get the tall oil from the processing area to the lime kiln. The burner was a low NO_X burner designed to feed a combination of liquid and gaseous fuel into the kiln. Compared to what was in the kiln, this burner provided some efficiency that reduced total heat requirements by 6% or more. To provide stability, a minimum of 5.8% of the total heat input must come from natural gas. It was not anticipated that this change allowed for an increase in production. It did not cause a change in the rated heat input capacity of the kiln. This project had no impact on Tall Oil production or emissions from the Tall Oil source (SN-17). There were no emissions changes associated with this modification.

Permit 224-AOP-R8 was issued to Green Bay Packaging, Inc. – Arkansas Kraft Division on August 17, 2006. This modification application allowed the facility to change the emissions factors used for criteria pollutants from pounds pollutant per pound of steam to pounds pollutant per ton of black liquor solids (BLS) for the Recovery Boiler (SN-05A). Previous permit limits restricted the amount of steam that could be produced to a level below the steam generating capacity of the boiler and below the capacity of the boiler to process BLS. This modification changed the emission limits to the boiler BLS processing capacity. There were no physical changes to the facility. This source was not regulated by PSD.

Hourly and annual permit limits of the Recovery Boiler (SN-05A) emissions were based on an emission factor times the amount of steam produced. These factors were developed using stack test data. Therefore, the permit limited hourly and annual steam production and also limited the hourly and annual Black Liquor Solids (BLS) throughput.

Industry standard at this time was to base the emission factor on pounds of pollutants per pounds of BLS instead of steam production. Green Bay changed their emission factor basis with this modification. Because emissions were limited by the amount of BLS burned, an annual steam production limit was no longer needed. However, steam production on an hourly basis was conveniently measured. So, compliance with hourly emissions was demonstrated by the original hourly steam limit, and compliance on an annual basis was based on the new BLS limit.

Additionally, this modification incorporated the emissions changes brought about by replacing the electrostatic precipitator as the source control device for the Recovery Boiler in 2003. MACT rules required installation of a new electrostatic precipitator and this was included in Permit #224-AOP-R3. The ESP was installed in 2003 and stack testing was done three times after installation.

No projects were done to cause or enable an increase in BLS processing. These permit changes reduced the permitted PM by 816.8 tpy, reduced the permitted PM_{10} by 482.0 tpy, reduced the permitted SO₂ by 336.1 tpy, reduced the permitted VOC by 42.0 tpy, increased the permitted CO by 20.8 tpy and increased the permitted NO_X by 74.6 tpy. Actual emissions increases were not anticipated.

Permit #224-AOP-R9 was issued on June 4, 2007. This permitting action allowed the facility to modify VOC emission factors and production limits for the #1 and #2 Paper Machines (SN-25A & SN-25B). The increase in production did not constitute a Prevention of Significant Deterioration (PSD) modification because there was no physical change or change in the method of operation at SN-25A & SN-25B. Lastly, this modification allowed the permittee to increase the short term CO emissions from the #3 Wood Waste Boiler (SN-04). The current permitted short term CO emission limit was based on an inaccurate heat input capacity (396.5 MMBTU/hr) for the #3 Wood Waste Boiler. The heat input capacity was corrected in 224-AOP-R3 (452 MMBTU/hr); however the CO limit was not changed. Permitted VOC, Manganese, Acetone, Hazardous Air Pollutants (HAPs) and Air Containments emissions decreased by 188.6 tons/year (tpy), 0.28 tpy, 2.57 tpy, 113.70 tpy, and 69.82 tpy, respectively.

Permit #224-AOP-R10 was issued on April 14, 2008. This permitting action incorporated the following administrative amendments and modifications:

- Removed the Boiler MACT reference in the Source Description area for #1 Package Boiler, SN-14.
- Replaced Specific Condition #19 of Air Permit #224-AOP-R8 which was mistakenly removed from Permit #224-AOP-R9.
- Corrected the referenced condition in Specific Condition #183 of Permit #224-AOP-R9. The condition should reference Specific Condition #184 (A-G); not #167 Permit #224-AOP-R9. However, with this modification the referenced specific condition is now Specific Condition #184 with a reference to Specific Condition #185 (A-G).
- Corrected the referenced condition in Specific Condition #85D. The condition should reference Specific Condition #166; not #173. However, with this modification the referenced specific condition is now Specific Condition #86D with a reference to Specific Condition #167.
- Granted an 18-month extension for the construction of a modification to the #2 Lime Kiln (SN-08) to burn Tall Oil as fuel in the kiln. The facility originally received authorization to modify the kiln in Permit #224-AOP-R7, issued May 18, 2006; which provided a deadline to have work completed by November 18, 2007. This modification granted an extension to have work completed by May 18, 2009.
- Changed emission monitoring parameters for emissions from the Waste Treatment System (SN-12). The specific condition for this source specified monitoring finished paper production, but emission factors were actually based on water flow into the system. Therefore, the condition was revised to limit Kraft pulp processed at the facility.

Permitted emissions for VOC and Methyl Ethyl Ketone decreased by 51.8 tons/year (tpy) and 98.13 tpy, respectively. Permitted emissions for Acetaldehyde and Methanol increased by 9.98 tpy and 36.31 tpy, respectively. These emission changes were due to the revised emission factors for the Waste Treatment System (SN-12).

Permit #224-AOP-11 was issued on October 14, 2008. This permitting action was to reroute the HVLC emissions from the #1 Package Boiler (SN-14) to the #1 Wood Waste Boiler (SN-02). Actual emissions from the #1 Wood Waste Boiler were significantly less than permitted emissions therefore there were not any changes in the permitted emission rates for SN-02. Also this modification established an alternate operating scenario to change the pH control from the paper machines back into the Pulp Mill. This operating scenario involved turning on CO₂ going into the final washing stage of each of the Brown Stock Washer lines (SN-11) and reducing the amount of pH controlling chemicals (alum, sulfuric acid and CO₂) used on the paper machines. Permitted emission rates remained unchanged.

Permit #224-AOP-R12 was issued on April 18, 2011. This permitting action was to renew the facility's existing permit. During this modification, emission factors were updated and some previously permitted sources were re-listed as insignificant activities. Emissions from paved and unpaved roads (SN-40) were included in this permit and methane emissions associated with the landfill (SN-30) were reduced.

On January 21, 2009, the facility submitted an application for a minor modification to the existing permit. The modification was to allow the use of low sulfur diesel fuel as a fuel in the Recovery Boiler (SN-05A). A draft permit was issued June 2009. However, the permit was not issued final. Instead the permit was held and rolled into the renewal application. During this period, the facility's need for this modification had passed and the facility no longer needed this to be included in the permit.

On August 14, 2009, the facility submitted a letter to the Department requesting to add "used oil" into the fuel oil storage tank and to be burned in the #2 Package Boiler (SN-15).

On September 9, 2009, the facility submitted a request to remove the Alternate Operating Scenario for SN-15.

On June 9, 2010, the facility submitted a request to modify Specific Conditions #7 and #19 of Permit #224-AOP-R11. These conditions specified the material that may be used as fuel in the #1 and #3 Wood Waste Boilers (SN-02 and SN-04). One of the permitted fuels was for waste polyethylene pellets. The facility requested to change this name to "scrap non-halogenated plastics". Also the facility requested that the scrap non-halogenated plastic be limited to 15% by weight of the total fuel burned on an annual basis.

POLLUTANT	TONS/YEAR (TPY)	
PM	+96.5	
PM ₁₀	-23.6	
SO ₂	-32.2	
VOC	-287.8	
СО	-366.3	
NOx	-45.2	
Lead	+0.10	
Total HAPs	-6.37	
Total Air Contaminants	-2506.85	

Permitted emission limits were changed as follows:

Permit #224-AOP-R13 was issued on February 14, 2012. This modification was to make permanent an alternate operating scenario for the Brownstock Washers (SN-11). Permitted emissions remained unchanged.

Permit #224-AOP-R14 was issued on November 8, 2012. This modification was to replace the steam quench tank with a spray scrubber on the Slaker/Causticizers, SN-36. This revision did not cause any increase in emissions from SN-36. However, permitted emissions changed to reflect a change in the permitted capacity of the lime kiln that took place with Permit #0224-AOP-R12 but the effect of that change was not calculated into SN-36. Emissions were reduced to correspond to that production reduction. Also the modification was to correct a calculation error that was submitted during the Title V renewal application. Based on the emission factor and the annual production for the Tall Oil Plant, SN-17, the emission rate listed in the application (0.18 tons Methanol/yr) was inaccurate. This modification permitted the source for the actual emission rate of 0.70 tons Methanol/yr. Total permitted HAPs emissions increased by 0.16 tons/year (tpy) and total air contaminants decreased by 1.46 tpy.

SECTION IV: SPECIFIC CONDITIONS

SN-01

Wood Waste Dryer

Source Description

The Wood Waste or Bark Dryer (SN-01) was installed in 1980. This source was removed from service in 1997.

Specific Conditions

1. The Wood Waste Dryer (SN-01) was removed from service. The Dryer shall not be placed back into service without undergoing appropriate permitting procedures. [40 CFR Part 52.21 (b)(3)(viii)]

SN-02

#1 Wood Waste Boiler

Source Description

The #1 Wood Waste Boiler (SN-02) has a maximum heat input capacity of 162 MMBTU/hr. Wood waste and natural gas are fired in this boiler. The boiler was constructed in 1968 and has not been modified since that time.

HVLC emissions previously routed to the #1 Package Boiler (SN-14) are now routed to #1 Wood Waste Boiler as a backup control device for the HVLC Collection system (SN-38).

Specific Conditions

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #6, #7, and #9. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	191.0	215.0
SO ₂	4.1	18.0
VOC	116.0	15.0
СО	956.5	326.0
NO _X	57.0	15.0
Lead	0.01	0.03
3. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #6, #7, and #10. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
РМ	372.0	420.0
Acetaldehyde	0.13	0.59
Acetone	0.03	0.13
Acrolein	0.65	2.84
Benzene	0.68	2.98
Formaldehyde	0.71	3.12
Hydrogen Chloride	3.08	13.50
Manganese	0.26	1.14
Styrene	0.31	1.35
Toluene	0.15	0.65

4. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [40 CFR Part 52, Subpart E]

SN	Limit	Regulatory Citation
02	40%	§19.503

- 5. The permittee shall conduct daily 6-minute opacity readings on SN-02 in accordance with EPA Reference Method #9 whenever wood waste is being used as fuel. The results of these readings shall be recorded in a log which shall be kept on site and made available for inspection upon request. [§19.502 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 6. Steam generation in the #1 Wood Waste Boiler (SN-02) shall not exceed 100,000 pounds of steam per hour during boiler operation based on a 24 hour rolling average. Maximum annual steam production will not exceed 225,000,000 pounds, determined on a 12 month rolling total. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

- 7. Untreated wood waste, scrap materials from mill processes, agricultural residues, furniture manufacturing waste, recycled sanitary products, scrap non-halogenated plastics, natural gas, and/or other approved fuels shall be used to fire this boiler. Usage of furniture manufacturing waste shall be limited to 3% of total fuel consumption (based on tons of fuel purchased) on a twelve month rolling total. Usage of scrap non-halogenated plastics shall be limited to 15% by weight of the total fuel burned on an annual rate. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 8. The permittee shall maintain monthly records which demonstrate compliance with Specific Conditions #6 and #7. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. 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 be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 9. The #1 Wood Waste Boiler (SN-02) shall be tested for PM_{10} , VOC, CO, and NO_X emissions using EPA Reference Method 201 or Method 201A for PM_{10} , Method 25A for VOC, Method 10 for CO, and Method 7E for NO_X . Each test shall consist of at least 3 sampling periods at a minimum of 1 hour each. Compliance testing shall be conducted while the equipment being tested is operating within 90% of its permitted capacity. If equipment does not attain 90% of permitted capacity during testing, the operating rate during testing will be 90% of the maximum operating rate until the next test is completed. This testing is to be completed once in the first year of every 5 year permit period. This test data shall be used for determination of compliance with the conditions set forth in this permit. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 10. The #1 Wood Waste Boiler will be the backup control device for reducing the HAP emissions from the HVLC system (SN-38). The HAP emissions stream shall be introduced into the combustion air going to the boiler. The wood waste boiler will not be used more than 1,000 hours in any 12 month period to incinerate emissions collected in the HVLC system. [§19.304 of Regulation #19 and 40 CFR 63.443(d)(4)]
- 11. The facility shall maintain records of the time that the #1 Wood Waste Boiler is being used as a backup control device. Records are to be maintained on an hourly basis. Such records shall be maintained on site and made available to the Department upon request. Failure to comply with these conditions shall be considered a violation of the mass emissions limit. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-03

#2 Wood Waste Boiler

Source Description

The #2 Wood Waste Boiler (SN-03) has a maximum heat input capacity of 162 MMBTU/hr. Wood waste and natural gas are fired in this boiler. The boiler produces a maximum of 100,000 pounds of 600 psi steam hourly. The boiler was constructed in 1974 and has not been modified since that time.

Specific Conditions

12. The #2 Wood Waste Boiler (SN-03) was removed from service. The boiler shall not be placed back into service without undergoing appropriate permitting procedures. [40 CFR Part 52.21 (b)(3)(viii)]

SN-04

#3 Wood Waste Boiler

Source Description

The #3 Wood Waste Boiler was originally installed as a recovery boiler in 1965. It was shut down in 1975. In 1979, the recovery boiler was refurbished and became the #3 Wood Waste Boiler.

The #3 Wood Waste Boiler (SN-04) has an estimated heat input capacity of 452 MMBTU/hr. The heat input capacity was increased from 206.5 MMBTU/hr in permit #224-AOP-R1. Wood waste and natural gas are fired in this boiler. BACT for this piece of equipment was determined to be low NO_X burners in conjunction with flue gas recirculation. Testing has demonstrated that emissions are not changed by discontinuing use of the FGR. Therefore, FGR is no longer required at this source. In permit # 224-AOP-R0, the facility chose to take a limit on SO_2 emissions from the #3 Wood Waste and #2 Package boilers in order to avoid further PSD requirements.

The #3 Wood Waste Boiler emits PM that is controlled by multiclones built into the flue gas exit path and by a wet scrubber. The PM emissions from the #3 Wood Waste Boiler would be greater than 100 tons per year without the multiclones and wet scrubber in place. Therefore, it is a listed unit for CAM. While there are no indicators that can be used to monitor the performance of the multiclones in the flue gas exit path, indicators for the operation of the wet scrubber shall be monitored. These indicators are pressure drop across the scrubber and scrubbing liquid circulation rate.

The #3 Wood Waste Boiler is also a control device to reduce total HAP emissions from the HVLC system (SN-38). The routing of HAPs from SN-38 to the #3 Wood Waste boiler causes the boiler to be included in the NESHAP requirements under 40 CFR Part 63, Subpart S. These requirements are covered within the Specific Conditions for the HVLC system (Specific Condition #150 through #158). Emissions listed here reflect the incineration of the vapors that are routed from the HVLC system.

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 complying with Specific Conditions #17, #18, #19, and #22. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	45.2	145.0
SO ₂	9.6	42.0

Pollutant	lb/hr	tpy
VOC	22.5	40.0
СО	135.6	290.0
Lead	0.02	0.10

14. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #18, #19, #22 and #23. [§19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
NO _X	135.6	593.9

15. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #17, #18, #19, and #22. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	45.2	145.0
Acetaldehyde	0.38	1.64
Acetone	0.09	0.38
Acrolein	1.81	7.92
Benzene	1.90	8.32
Formaldehyde	1.99	8.71
Hydrogen Chloride	8.59	37.62
Manganese	0.72	3.16
Napthalene	0.04	0.20
Propionaldehyde	0.03	0.12
Styrene	0.86	3.76
Toluene	0.42	1.82

- 16. The source shall not emit any gases that exhibit greater than 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity as measured in accordance with EPA Reference Method 9. Continuing compliance with this Specific Condition shall be demonstrated by compliance with Specific Condition #21. [§19.502 of Regulation #19 and §60.43b(f)]
- 17. The #3 Wood Waste Boiler (SN-04) shall be tested for PM_{10} , SO₂, VOC, and CO emissions. Method 5 and Method 202 shall be used for PM_{10} with all emissions being reported as PM_{10} . Method 6C shall be used for SO₂. Method 25A shall be used for VOC. Method 10 shall be used for CO. Each test shall consist of at least 3 sampling periods at a minimum of 1 hour each. Compliance testing shall be conducted while the equipment being tested is operating within 90% of its permitted capacity. If equipment does not attain 90% of permitted capacity during testing, the operating rate during testing will be 90% of maximum operating rate until the next test is completed. This testing is to be completed once in the first year of every 5 year permit period. This test data shall be used for determination of compliance with the conditions set forth in this permit. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 18. Steam generation in the #3 Wood Waste Boiler (SN-04) shall not exceed 270,000 pounds per hour of steam during boiler operation based on a 24 hour rolling average. Maximum annual steam production shall not exceed 2,100,000,000 pounds, determined on a 12 month rolling total. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 19. Untreated wood waste, scrap materials from mill processes, agricultural residues, furniture manufacturing waste, recycled sanitary products, scrap non-halogenated plastics, natural gas, and/or other approved fuels shall be used to fire this boiler. Usage of furniture manufacturing waste shall be limited to 3% of total fuel consumption (based on tons of fuel purchased) on a twelve month rolling total. Usage of scrap non-halogenated plastics shall be limited to 15% by weight of the total fuel burned on an annual rate. Multiclones in series with a venturi scrubber shall be used at all times when this unit is operating and burning any fuel other than 100% natural gas. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 20. The permittee shall maintain monthly records which demonstrate compliance with Specific Conditions #18 and #19. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. 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 be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

- 21. The liquid flow to the scrubber and the differential pressure across the scrubber for the #3 Wood Waste Boiler shall be maintained at or above the flow rate and the differential pressure measured during any previously successful stack test for PM_{10} in which the stack test is designed to demonstrate the minimum flow and minimum differential pressure required to attain compliance with the PM_{10} emission limit. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 22. The facility shall continuously monitor and record once per hour or continuously (by strip chart or electronically) the pressure drop across the scrubber and the liquid flow to the scrubber. The flow rate and pressure drop compliance demonstration measurements are based on a 3 hour rolling average. Scrubber flow and pressure drop do not have to be measured when SN-04 is not producing steam or steaming only with natural gas as fuel. These records shall be kept on site and shown to Department personnel upon request. [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 23. The #3 Wood Waste Boiler is an affected source of 40 CFR 60, Subpart Db. [§19.304 of Regulation #19 and 40 CFR 60, Subpart Db]
 - A. Pursuant to §60.46b(b) and (d), within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup of the reworked #3 Wood Waste Boiler, the facility shall determine compliance with the particulate matter emission standards as required in §60.43b.
 - B. Pursuant to §60.43b(c)(1), after the initial performance test for particulate matter (which was performed on May 19, 1998) for the #3 Wood Waste boiler is completed or required to be completed, whichever date comes first, the facility shall not emit particulate matter in excess of 0.10 lb/MMBTU.
 - C. Pursuant to §60.43b(f), after the initial performance test for particulate matter for the #3 Wood Waste Boiler is completed or is required to be completed, whichever date comes first, the facility shall not emit any gases that exhibit greater than 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity.
 - D. Pursuant to 60.44b(d), after the initial performance test for NO_X for the #3 Wood Waste Boiler is completed or is required to be completed, whichever date comes first, the facility shall not emit any gases that contain NO_X in excess of 0.30 lb/MMBTU based on a 30 day rolling average as specified in 60.44b(a).
 - E. Pursuant to §60.43b(g) and §60.46b(a), the particulate matter and opacity standards of §60.43b(c)(1) and §60.43b(f) apply for the #3 Wood Waste Boiler at all times, except during periods of startup, shutdown, or malfunction. Compliance with these requirements shall be determined as specified in §60.46b(d).
 - F. Pursuant to 60.46b(a), the NO_X emission standards under 60.44b apply at all times. Compliance with these requirements shall be determined as specified in 60.46b(e).

- G. Pursuant to §60.48b (a) and (e)(1), the facility is required to install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere from the #3 Wood Waste Boiler and record the output of the system. As per 40 CFR 60.13(b), the installation date of the CEM shall be no later than thirty days from the date of start-up of the source. The facility has requested a variance to this NSPS requirement. In a letter dated July 11, 2002, EPA approved the request for alternate monitoring to the COMs, by:
 - 1. Monitoring the scrubber water circulation flow and maintain flow above a minimum rate determined by performance testing; and
 - 2. Monitoring the pressure drop across the scrubber and maintain pressure drop above a minimum determined by performance testing.

These requirements are addressed as Specific Condition #22.

- H. Pursuant to 60.48b(b), the facility shall install, calibrate, maintain, and operate a continuous monitoring system for measuring NO_X emissions to the atmosphere, the diluent CO₂ emissions, and record the output of the system as per the requirements of 60.48b(c), (d), and (f). The CEM may be taken off line when the boiler is out of service longer than 24 hours. The CEM for measuring NO_X shall be in continuous operation (except as noted above) and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Failure to maintain operation time shall also constitute a violation of the CEMs conditions.
- I. Pursuant to §60.49b, the facility is required to notify the Department of the initial startup of the reworked #3 Wood Waste Boiler. As per §60.49b(a)(1), the facility has notified the Department that the design heat input capacity of the boiler is to be 452 MMBTU/hr. The fuels to be combusted are wood waste and natural gas. As per §60.49b(a)(3), the facility is also to notify the Department of the annual capacity factor at which the facility anticipates operating the boiler based upon all the fuels fired and each individual fuel fired.
- J. Pursuant to §60.49b(b), the facility shall submit the performance test data for particulate matter from the initial performance test and performance evaluation of the CEMs for the #3 Wood Waste Boiler to the Department. The applicable performance specifications in 40 CFR Part 60, Appendix B shall be used. The facility has submitted this information to ADEQ on July 14, 1998.
- K. Pursuant to §60.49b(d), the facility shall record and maintain records of the amounts of each fuel combusted during each day for the #3 Wood Waste Boiler and calculate the annual capacity factor individually for natural gas and wood waste for each calendar quarter. The annual capacity factor is to be determined on a twelve month rolling average basis with a new capacity factor calculated at the end of each calendar month.

- L. Pursuant to §60.49b(f), the facility shall maintain records of opacity for the #3 Wood Waste Boiler as required under the opacity standard of §60.43b or a federally approved variance or the interim variance approved by the Department in Specific Condition #23G.
- M. Pursuant to §60.49b(g), the facility shall maintain records for the #3 Wood Waste boiler for each steam generating unit operating day. As per §60.48g(i), the facility shall submit a quarterly report containing a summary of these records. These records shall be submitted to the Department and shall be postmarked by the 30th day following the end of each calendar quarter.
- N. Pursuant to §60.49b(h) (1) and (3), the facility is required to submit excess emission reports for any calendar quarter during which there are excess emissions from the #3 Wood Waste Boiler. If there are no excess emissions during the calendar quarter, the facility shall submit a semiannual report stating that no excess emissions occurred during the semiannual reporting period. Excess emissions are defined as all 6 minute periods during which the average opacity exceeds the opacity standards of §60.43b(f).
- O. Pursuant to 60.49b(o), the facility shall retain all required records for a period of two years following the date of such record.
- 24. The #3 Wood Waste Boiler is a control device for reducing the HAP emissions from the HVLC system (SN-38). The HAP emission stream is introduced into the combustion air going to the boiler. This requirement came into effect April 16, 2001. [§19.304 of Regulation #19 and 40 CFR 60, Subpart S §63.443(d)(4)]

SN-05A

Recovery Boiler

Source Description

The Recovery Boiler can fire up to 730 MMBTU/hr of black liquor. The boiler itself was installed in 1975 and has not been modified since that time. The electrostatic precipitator was replaced in May 2003, and all flue gases were routed through one stack.

The Recovery Boiler uses an ESP to control emissions of particulate. Without the ESP in operation, PM emissions would be greater than 100 tons per year. Therefore, this is a listed unit for CAM. However, the Recovery Boiler is subject to 40 CFR Part 63, Subpart MM with a compliance date of March 13, 2004. This rule was finalized after November 15, 1990. Therefore, the Recovery Boiler is exempt from the requirements of CAM.

Specific Conditions

25. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #33, #34, #36, #38, #41, #42, #43, and #44. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	12.0	38.0
SO ₂	60.0	157.9
VOC	10.0	19.7
СО	223.1	674.8
NO _X	80.0	280.6
Lead	0.01	0.10
TRS	33.81	148.10

26. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #33, #34, #38, #41, #43, and #44. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	30.0	93.2
Benzene	0.04	0.14
Formaldehyde	0.26	1.05
Hydrogen Chloride	2.98	12.05
Methanol	2.38	9.64
Methylene Chloride	0.03	0.11
Sulfuric Acid	1.08	4.38
Tetrachloroethylene	0.03	0.11
1,2,4- Trichlorobenzene	0.04	0.17

- 27. The permittee shall comply with the opacity and monitoring standards of 40 CFR, Subpart MM for the recovery boiler. Compliance with this specific condition shall be demonstrated through Specific Conditions #29, #31 and #32. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 28. The permittee shall calibrate, maintain, and operate a Continuous Opacity Monitoring System (COMS) according to the provision in §§63.6(h), 63.8, and 63.864(d)(1-4). Operation of this COMS is not required when the Recovery Boiler is not in operation. [40 CFR 63.864(d) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 29. The permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan as described in §63.6(e)(3) that describes procedures for operating and maintaining the Recovery Boiler during periods of startup, shutdown, and malfunction to minimize HAP emissions and a program of corrective action for malfunctioning of the electrostatic precipitator or the COMS. [40 CFR 63.866(a) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 30. The permittee shall implement the corrective action specified in the SSM Plan when the average of ten consecutive 6-minute averages results in a measurement greater than 20% opacity. [40 CFR 63.864(k)(1)(i) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

- 31. If opacity measured by the COMS is greater than 35% for 6% or more of the operating time within any quarterly period, the Recovery Boiler is in violation of the standards of Specific Condition #43 and 40 CFR 63.862. [40 CFR 63.864(k)(2)(i) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 32. A quarterly excess emissions report containing the information specified in §63.10 and §63.867(c) shall be submitted to EPA and to the Department if the conditions of Specific Conditions #30 or #31 occur. If those conditions do not occur, semi-annual reporting to indicate such is required. [40 CFR 63.867(c) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 33. Steam generation in the recovery boiler shall be limited to 394,000 pounds of steam per hour during boiler operation based on a 24 hour rolling average. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 34. The only fuels to be used in the Recovery Boiler (SN-05A) shall be black liquor solids and natural gas. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 35. The permittee shall maintain monthly records which demonstrate compliance with Specific Conditions #33 and #34. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. 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 be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 36. The TRS concentration at the recovery boiler shall be limited to 40 ppm. This limit shall be measured as H₂S on a dry basis and on a 12 hour average, corrected to 8% volume oxygen. During periods when the recovery boiler is down and the oxygen content is greater than 19%, the TRS concentration shall not be corrected for oxygen. [§19.804 of Regulation #19 and §111d of the Clean Air Act]
- 37. The facility shall continue to calibrate, maintain, and operate a monitoring device (CEMS) that continuously monitors and records the total reduced sulfur (TRS) and O₂ concentration of gases leaving the recovery boiler through the stack. The TRS monitor shall be operated in accordance with Performance Specification #5. The O₂ monitor shall be operated in accordance with Performance Specification #3. Both Performance Specifications may be found in 40 CFR Part 60, Appendix B. The CEM may be taken off line when the boiler is out of service longer than 24 hours. The CEM shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Failure to maintain operation time shall constitute a violation of the CEMs conditions. [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]

- 38. The throughput of black liquor solids in the recovery boiler shall be limited to 438,000 tons per consecutive twelve month period. The black liquor solid firing rate shall be calculated by measuring the flow of strong black liquor and multiplying this flow by the measured weight concentration of solids in the liquor. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 39. The flow of strong black liquor shall be measured with a flow meter and shall be recorded at least once per hour while burning BLS. The weight concentrations of solids in the liquor shall be measured and recorded at least once per 8 hour period while burning BLS. The black liquor solids firing rate shall be calculated by multiplying the flow by the weight concentration of solids in the liquor. The facility shall maintain a daily and monthly log of the tons of BLS fired in the Recovery Boiler. Records for the annual throughput of BLS are to be maintained on a twelve month rolling total, updated monthly. Such records shall be maintained on site and made available to the Department upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. Failure to comply with these conditions shall be considered a violation of the mass emission limit. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 40. Records shall be maintained of black liquor solids firing rate in tons per day. 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 be submitted in accordance with General Provision #7. [40 CFR 63.866(c)(1) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 41. The electrostatic precipitator (ESP) shall not be bypassed during required ESP maintenance as long as black liquor solids are being combusted in the boiler and within one hour after flow of black liquor has been stopped. Gases from combustion of black liquor solids in the recovery boiler shall not be vented to the atmosphere unless the ESP is operating. The ESP may be bypassed during required ESP maintenance if the only fuel in the boiler is natural gas. [§19.303 of Regulation #19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 42. The Recovery Boiler (SN-05A) shall be tested for PM_{10} , SO₂, VOC, CO, and NO_X emissions using EPA Reference Method 201 or Method 201A for PM_{10} , Method 6C for SO₂, Method 25A for VOC, Method 10 for CO, and Method 7E for NO_X. Each test shall consist of at least 3 sampling periods at a minimum of 1 hour each. Compliance testing shall be conducted while the equipment being tested is operating within 90% of its permitted capacity. If equipment does not attain 90% of permitted capacity during testing, the operating rate during testing will be 90% of the maximum operating rate until the next test is completed. This testing is to be completed once in the first year of every 5 year permit period. This test data shall be used for determination of compliance with the conditions set forth in this permit. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]

- 43. The permittee shall establish an overall PM emission limit for the Recovery Boiler, using the methods in §63.865(a)(1) and (2), such that the sum of PM emissions from the Recovery Boiler (SN-05), the Smelt Dissolving Tank (SN-07), and the #2 Lime Kiln (SN-08) do not exceed the sum of individual units listed in §63.862(a)(1)(i). [40 CFR 63.862(a)(1)(ii) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 44. The permittee shall conduct an initial performance test on PM emissions from the Recovery Boiler by September 9, 2004 using the test methods and procedures listed in §63.7 and §63.865(b). Testing was performed from July 21 through July 26, 2004. [40 CFR 63.865 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-07 Smelt Dissolving Tank Vent

Source Description

Two smelt dissolving tanks are located on the east and west side of the Recovery Boiler. Emissions from these tanks are emitted through a single vent (SN-07). A venturi scrubber is used for the control of particulate matter. This source was installed in 1975.

A venturi scrubber system was installed in the Spring of 2002 to meet the requirements of 40 CFR Part 63, Subpart MM. Without the scrubber in operation, PM emissions would be greater than 100 tons per year. Therefore, this is a listed unit for CAM. However, the Smelt Dissolving Tank Vent is subject to 40 CFR Part 63, Subpart MM with a compliance date of March 13, 2004. This rule was finalized after November 15, 1990. Therefore, the Smelt Dissolving Tank Vent is exempt from the requirements of CAM.

Specific Conditions

45. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #49, #50, #52, #60, and #61. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	8.9	35.7
SO ₂	0.3	1.1
VOC	0.6	2.2
NO _X	1.1	4.4
Lead	0.01	0.02
TRS	1.82	7.36

46. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #50, #52, #60, and #61. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	8.9	35.7
Formaldehyde	0.19	0.77
Methanol	0.50	2.04
Naphthalene	0.03	0.11
Ammonia	6.50	26.28

- 47. The permittee shall comply with the opacity and monitoring standards of 40 CFR Part 63, Subpart MM for the smelt dissolving tank vent. Compliance with this specific condition shall be demonstrated through Specific Conditions #52, #55, and #56.
- 48. The facility shall measure the particulate emissions from the smelt dissolving tank. Method 5 and Method 202 shall be used for PM_{10} with all emissions being reported as PM_{10} . Testing is to be completed once in the first year of every 5 year permit period. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 49. The TRS emission rates from the Smelt Dissolving Tank (SN-07) shall not exceed 0.0168 g/kg BLS. Compliance with this condition will be demonstrated by Specific Condition #51. [§19.804 of Regulation #19 and §111d of the Clean Air Act]
- 50. Operation of the smelt dissolving tank shall be limited by the firing of black liquor solids in the Recovery Boiler. Black liquor solids firing in the boiler are limited to 438,000 tons per consecutive twelve month period. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

- 51. The flow of strong black liquor shall be measured with a flow meter and shall be recorded at least once per hour while burning BLS. The weight concentrations of solids in the liquor shall be measured and recorded at least once per 8 hour period while burning BLS. The black liquor solids firing rate shall be calculated by multiplying the flow by the weight concentration of solids in the liquor. The facility shall maintain a daily and monthly log of the tons of BLS fired in the Recovery Boiler. Records for the annual throughput of BLS are to be maintained on a twelve month rolling total, updated monthly. Such records shall be maintained on site and made available to the Department upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. Failure to comply with these conditions shall be considered a violation of the mass emission limit. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 52. The scrubber shall be operated at or above the minimum flow rate and at or above the minimum pressure differential as determined during the initial performance test. [§19.703 of Regulation 19, 40 CFR Part 52, Subpart E, 40 CFR 63.864(e)(10) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 53. The permittee shall 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. [40 CFR 63.864(e)(10) and 40 CFR 63.8(c) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 54. The permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan as described in §63.6(e)(3) that describes procedures for operating and maintaining the Smelt Dissolving Tank during periods of startup, shutdown, and malfunction to minimize HAP emissions and a program of corrective action for malfunctioning of the scrubber or the CPMS. [40 CFR 63.866(a) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 55. The permittee shall implement the corrective action specified in the SSM Plan when any 3-hour average parameter value is outside the range of values established in the initial performance test. [40 CFR 63.864(k)(1)(ii) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 56. When six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in the initial performance test, the Smelt Dissolving Tank is in violation of the standards of Specific Condition #60 and 40 CFR 63.862. [40 CFR 63.864(k)(2)(iii) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 57. No more than one exceedance will be attributed to any given 24-hour period. [40 CFR 63.864(k)(3) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

- 58. A quarterly excess emissions report containing the information specified in §63.10 and §63.867(c) shall be submitted to EPA and to the Department if the conditions of Specific Conditions #55 or #56 occur. If those conditions do not occur, semi-annual reporting to indicate such is required.
- 59. The permittee shall maintain continuous records which demonstrate compliance with Specific Condition #52. Readings will be recorded every 15 minutes and averaged over three hours. Records shall clearly indicate when liquor is being added to the Recovery Boiler. Measurement of liquid flow and pressure drop is not required after liquor flow to the Recovery Boiler has been stopped for at least one hour. 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 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 60. The permittee shall establish an overall PM emission limit for the Smelt Dissolving Tank, using the methods in §63.865(a)(1) and (2), such that the sum of PM emissions from the Recovery Boiler (SN-05), the Smelt Dissolving Tank (SN-07), and the #2 Lime Kiln (SN-08) do not exceed the sum of individual units listed in §63.862(a)(1)(i). [40 CFR 63.862(a)(1)(ii) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 61. The permittee shall conduct an initial performance test on PM emissions from the Smelt Dissolving Tank by September 9, 2004 using the test methods and procedures listed in §63.7 and §63.865(b). Testing was performed from July 21 through July 26, 2004. [40 CFR 63.865 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-08 and SN-22 #2 Lime Kiln and NCG Incinerator

Source Description

The maximum firing rate of the #2 Lime Kiln (SN-08) is 60 MMBTU/hr. NCGs are combusted in the #2 Lime Kiln. The #2 Lime Kiln was constructed in 1975 and has not been modified since that time. The #2 Lime Kiln uses only natural gas or tall oil as fuel, and is equipped with a wet venturi scrubber.

Permit #224-AR-5 required the installation of a back-up incineration unit for the purpose of incinerating NCGs. In accordance with this provision, an NCG flare (SN-22) was installed in December 1994. This flare did not perform reliably. The facility constructed a new flare that was started up in May 1996.

The NCG flare serves to incinerate NCGs when the #2 Lime Kiln is not operating. The flare is supplemented with natural gas and has a firing rate of 4.5 MMBTU/hr.

The #2 Lime Kiln uses a wet scrubber to control emissions of particulate. Without the scrubber in operation, PM emissions would be greater than 100 tons per year. Therefore, this is a listed unit for CAM. However, the #2 Lime Kiln is subject to 40 CFR Part 63, Subpart MM with a compliance date of March 12, 2004. This rule was finalized after November 15, 1990. Therefore, the #2 Lime Kiln is exempt from the requirements of CAM.

The #2 Lime Kiln and the NGC Incinerator are subject to 40 CFR Part 63, Subpart S-National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry. They are used as control devices to reduce total HAP emissions for the LVHC system (SN-37). Emissions that are listed for SN-08 and SN-22 reflect the incineration of gases that are routed from the LVHC system.

Specific Conditions

62. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #67, #69, #72, #73, #75, #76, #77, #86, #87, and #88. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

SN	Pollutant	lb/hr	tpy
	PM ₁₀	35.2	154.2
	SO ₂	0.8	15.0
0.0	VOC	0.3	15.0
08	СО	4.5	21.3
	NO _X	8.4	45.0
	Lead	0.01	0.02
22	SO ₂	49.1	26.3
08 and 22 combined	TRS	6.43	28.15

63. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #69, #72, #73, #75, #76, #77, #86, #87, and #88. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Pollutant	lb/hr	tpy
	PM	35.2	154.2
08	Methanol	0.96	0.34
	Naphthalene	0.16	0.55

- 64. Visible emissions from SN-08 shall not exceed 20% opacity as measured by EPA Reference Method 9. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 65. The permittee shall comply with the opacity and monitoring standards of 40 CFR Part 63, Subpart MM for the lime kiln. Compliance with this specific condition shall be demonstrated through Specific Conditions #76, #77, and #81. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]

- 66. Visible emissions from SN-22 shall not exceed 20% opacity as measured by EPA Reference Method 9. Compliance with this condition will be burning only natural gas. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 67. The TRS emission rates from the #2 Lime Kiln (SN-08) shall not exceed 40 ppm. This limit shall be measured as H_2S on a dry basis and on a 12 hour average, corrected to 10% volume oxygen. During periods when the #2 Lime Kiln is down and the oxygen content is greater than 19%, the TRS concentration shall not be corrected for oxygen. [§19.804 of Regulation #19 and §111d of the Clean Air Act]
- 68. The facility shall continue to calibrate, maintain, and operate a monitoring device (CEMS) that continuously monitors and records the total reduced sulfur (TRS) concentration of gases leaving the #2 Lime Kiln (SN-08) and the O₂ concentration. The CEM may be taken off line when the kiln is out of service longer than 24 hours. The CEM shall meet minimum frequency of operation requirements of 95% up-time for each quarter and for each pollutant measured. Failure to maintain operation time shall constitute a violation of the CEMs conditions. [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]
- 69. The total throughput of lime through the #2 Lime Kiln (SN-08) shall be limited to 84,950 tons per consecutive rolling twelve month total. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 70. The permittee shall maintain records of CaO production for the #2 Lime Kiln in units of tons per day. [40 CFR 63.866(c)(2) and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]
- 71. The facility shall maintain monthly records of the lime throughput through the #2 Lime Kiln. Records of this throughput are to be maintained on a twelve month rolling total. Such records shall be maintained on site and made available to the Department upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 72. The NCG Incinerator (SN-22) shall be used at all times when NCGs are not incinerated in the #2 Lime Kiln (SN-08). The facility shall maintain effective incineration of NCGs at a minimum temperature of 1200°F for at least 0.5 second. [§19.804 of Regulation #19 and 111(d) of the Clean Air Act]
- 73. Operation of the NCG Incinerator shall not exceed 1000 hours on a consecutive 12 month basis. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

- 74. The facility shall maintain records of all hours of operation and minimum temperature for the NCG Incinerator updated daily. These records shall be kept on site and shall be provided to Department personnel on request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 75. The #2 Lime Kiln (SN-08) shall use only natural gas as fuel. [\$19.705 of Regulation #19, A.C.A. \$8-4-203 as referenced by \$8-4-304 and \$8-4-311, and 40 CFR 70.6]
- 76. Particulate emissions from the #2 Lime Kiln (SN-08) shall be controlled by a wet scrubber. The wet scrubber shall be used at all times when the #2 Lime Kiln is processing lime. [§19.303 of Regulation #19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 77. The liquid flow to the scrubber and differential pressure across the scrubber for the #2 Lime Kiln (SN-08) shall be maintained at or above the flow rate and the differential pressure measured, based on a three hour rolling average, as determined during the initial performance test. [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 864(e)(10), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 78. The facility shall continuously monitor and record once per hour or continuously (by strip chart or electronically) the pressure drop across the scrubber (SN-08) and the liquid flow to the scrubber. The flow rate and pressure drop compliance demonstration measurements are based on a three hour rolling average. Scrubber flow and pressure drop do not have to be measured when the source is not processing lime. These records shall be maintained on site and provided to Department personnel upon request. [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]
- 79. The permittee shall 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. [40 CFR 63.864(e)(10), 40 CFR 63.8(c) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 80. The permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan as described in §63.6(e)(3) that describes procedures for operating and maintaining the #2 Lime Kiln during periods of startup, shutdown, and malfunction to minimize HAP emissions and a program of corrective action for malfunctioning of the scrubber or the CPMS. [40 CFR 63.866(a) and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]
- 81. The permittee shall implement the corrective action specified in the SSM Plan when any 3-hour average parameter value is outside the range of values established in the initial performance test. [40 CFR 63.864(k)(1)(ii) and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]

- 82. When six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in the initial performance test, the #2 Lime Kiln is in violation of the standards of Specific Condition #87 and 40 CFR 63.862. [40 CFR 63.864(k)(2)(iii) and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]
- 83. No more than one exceedance will be attributed to any given 24-hour period. [40 CFR 63.864(k)(3) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 84. A quarterly excess emissions report containing the information specified in §63.10 and §63.867(c) shall be submitted to EPA and to the Department if the conditions of Specific Conditions #81 or #82 occur. If those conditions do not occur, semi-annual reporting to indicate such is required. [40 CFR 63.867(c) and A.C.A. §8- 4-203 as referenced by §8- 4-304 and §8-4-311]
- 85. The total HAP emissions routed from the LVHC system shall be controlled no later than April 16, 2001. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.443(a)(1)(i) and §63.440(d)]
- 86. The #2 Lime Kiln (SN-08) and the NCG Incinerator (SN-22) are the control devices for reducing the HAP emissions from the LVHC system (SN-37). [§19.304 of Regulation #19 and 40 CFR 60, Subpart S §63.443(d)(3) and (4)]
 - A. The HAP emission stream shall be introduced into the flame zone of the lime kiln. [\$63.443(d)(4)]
 - B. The NCG Incinerator shall be operated at a minimum of 871°C (1600°F) and a minimum residence time of 0.75 seconds. [§63.443(d)(3)]
 - C. A continuous monitoring device shall be installed in the NCG Incinerator to continuously measure and record the temperature in the firebox or in the ductwork immediately downstream of the firebox while HAPs are being burned. [§63.453(b)]
 - A record of NCG Incinerator temperature will be kept in a form suitable for inspection upon request for a period of at least five years. [§63.10(b)(2)(vii)]
 - 2. A record of each period during which the temperature probe is malfunctioning or inoperative shall be kept. [§63.10(b)(2)(vi)]
 - 3. A record shall be kept of all calibration checks, maintenance, and adjustments of the temperature probe. [\S 63.10(b)(2)(x) and (xi)]

- D. Operation of the NCG Incinerator (SN-22) below 871°C (1600°F) while burning HAPs shall constitute a violation of the emissions standard of Subpart S and shall be reported as a period of excess emissions as outlined in Specific Condition #148. [§63.453(o), except as provided in §63.443(e)]
- 87. The permittee shall establish an overall PM emission limit for the #2 Lime Kiln, using the methods in §63.865(a)(1) and (2), such that the sum of PM emissions from the Recovery Boiler (SN-05), the Smelt Dissolving Tank (SN-07), and the #2 Lime Kiln (SN-08) do not exceed the sum of individual units listed in §63.862(a)(1)(i). [40 CFR 63.862(a)(1)(ii) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 88. The permittee shall conduct an initial performance test on PM emissions from the #2 Lime Kiln by September 9, 2004 using the test methods and procedures listed in §63.7 and §63.865(b). Testing was performed from July 21 through July 26, 2004. [40 CFR 63.865 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 89. [RESERVED]

SN-11

Brownstock Washers

Source Description

Three sets of rotary-drum vacuum type Brownstock Washer Systems are used to separate pulp from spent black liquor. There are a total of eight individual Brownstock washer units. The A-Line and C-Line washers consist of three washers in series. The B-washers consist of two washers in series. Previously, open hoods captured emissions generated by each washing unit and vented through individual exhaust stacks. Pursuant to 40 CFR Part 63, Subpart S, the emissions from the washers are collected and passed to the HVLC system (SN-38) and taken to the #3 Wood Waste Boiler (SN-04) or #1 Wood Waste Boiler (SN-02) for control.

Specific Conditions

- 90. Emissions generated by the Brownstock Washers (SN-11) are collected in the HVLC Collection System (SN-38) thus eliminating emissions from SN-11. The washers cannot (based on the scope of the HVLC Collection System) be vented into the atmosphere. [40 CFR Part 52.21 (b)(3)(viii)]
- 91. The permittee may add CO₂ to the shower water of each Brownstock washer line (SN-11) to control pH at a specified level based on demand on the Paper machines (SN-25A and SN-25B). This replaces most of the pH control requirements at the Paper machines. [A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-12

Aerated Settling Basin and Post Aerated Stabilization Basin

Source Description

The Aerated Settling Basin and Post Aerated Stabilization Basin are part of the wastewater treatment for this facility. This source was introduced in 1965.

Specific Conditions

92. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #94. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	19.3	72.9

93. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #94. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetaldehyde	2.05	7.76
Methanol	17.22	65.16

- 94. The permittee shall not exceed 310,333 bone dried tons of Kraft pulp during any consecutive twelve month period. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 95. The facility shall maintain records of the tons of bone dried Kraft pulp produced. Records for these annual rates are to be maintained on a twelve month rolling total, updated monthly. Such records shall be maintained on site and made available to the Department upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. Failure to comply with these conditions shall be considered a violation of the mass emissions limit. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-15

#2 Package Boiler

Source Description

The #2 Package Boiler (SN-15) has a maximum heat input capacity of 205 MMBTU/hr. Natural gas is fired in the boiler. Fuel oil is fired in the boiler under emergency situations such as natural gas curtailment. The boiler was constructed in 1996 and began operation in February 1997.

Specific Conditions

96. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #100, #101, and #104. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	1.6	6.7
SO ₂	1.5	6.6
VOC	1.2	4.9
СО	16.9	74.0
NO _X	13.8	39.0

97. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #100 and #101. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	1.6	6.7
Butane	0.42	1.85
Ethane	0.62	2.73
Hexane	0.36	1.58
Methane	0.46	2.02
Pentane	0.52	2.29
Propane	0.32	1.41

- 98. Visible emissions from SN-15 shall not exceed 20% opacity as measured by EPA Reference Method 9. Compliance shall be demonstrated by complying with Specific Condition #99. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 99. The permittee shall conduct daily 6-minute opacity readings on SN-15 in accordance with EPA Reference Method #9 each day the boiler burns oil. The results of these readings shall be recorded in a log which shall be kept on site and made available for inspection upon request. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 100. The #2 Package Boiler shall only burn natural gas as fuel. Fuel oil shall only be burned in the event of natural gas curtailment or for short periods, upon notification of the Department, to test boiler fuel oil combustion controls. Used oil may be added to the fuel oil during gas curtailment provided that the used oil meets the exemption criteria listed in Regulation 23 §279.11. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 101. Steam generation in the boiler shall not exceed 199,000 pounds of steam per hour based on a 24 hour rolling average. Maximum annual steam production shall not exceed 1,700,000,000 pounds, determined on a 12 month rolling total. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 102. The facility shall maintain records of the steam generation at SN-15. Records for the hourly rate are to be maintained on a 24 hour rolling average, updated hourly. Records for the annual steam production are to be maintained on a twelve month rolling total, updated monthly. Such records shall be maintained on site and made available to the Department upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. Failure to comply with these conditions shall be considered a violation of the mass emissions limit. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 103. The facility accepted limits on SO₂ in order to avoid further PSD requirements in permit #224-AOP-R0. Within 60 days after the date of issuance of this permit, the #2 Package Boiler (SN-15) was tested for SO₂ using EPA Reference Method 6. A written report of the results of the completed tests was furnished to the Compliance Section of the Department within 30 days of test completion (October 1, 1997). [§19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]
- 104. The #2 Package Boiler is an affected source of 40 CFR Part 60, Subpart Db-Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. [§19.304 of Regulation #19 and 40 CFR Part 60, Subpart Db]
 - A. The facility shall not emit any gases from the #2 Package Boiler that contain NO_X in excess of 0.20 lb/MMBTU based on a 30 day rolling average. [§60.44b(a)]

- B. The NO_X emission standards under 60.44b for the #2 Package Boiler apply at all times. Compliance with these requirements shall be determined as specified in 60.46b(c) and (e). [60.46b(a)]
- C. The facility shall install, calibrate, maintain, and operate a continuous monitoring system for measuring NO_X emissions and the diluent CO_2 emissions from the #2 Package Boiler to the atmosphere and record the output of the system as per the requirements of §60.48b(c), (d), (e), (f), and (g). The CEM may be taken off line when the boiler is out of service longer than 24 hours. The CEM shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Failure to maintain operation time shall constitute a violation of the CEMs conditions. [§60.48b(b)]
- D. The facility has notified the Department of the February 15, 1997, initial startup of the #2 Package Boiler. As per §60.49b(a)(1), the facility has notified the Department that the design heat input capacity of the boiler is to be 205 MMBTU/hr. The fuel to be combusted is natural gas. Fuel Oil will be used in the event of natural gas curtailment. As per §60.49b(a)(3), the facility has notified the Department of the annual capacity factor at which the facility anticipates operating the boiler based upon all the fuels fired and each individual fuel fired. [§60.49b]
- E. The facility shall submit the performance test data for NO_X from the initial performance test and performance evaluation of the CEMs for the #2 Package Boiler to the Air Division Compliance Section. The applicable performance specifications in 40 CFR Part 60, Appendix B shall be used. The facility submitted this report on November 2, 1997. [§60.49b(b)]
- F. The facility shall record and maintain records of the amounts of each fuel combusted during each day for the #2 Package Boiler and calculate the annual capacity factor individually for natural gas and oil for each calendar quarter. The annual capacity factor is to be determined on a 12 month rolling average basis with a new capacity factor calculated at the end of each calendar month. [§60.49b(d)]
- G. The facility shall maintain records for the #2 Package Boiler for each steam generating unit operating day. As per §60.49b(i), the facility shall submit a quarterly report containing these records. These records shall be submitted to the Air Division Compliance Section and shall be postmarked by the 30th day following the end of each calendar quarter. [§60.49b(g)]

- H. The facility is required to submit excess emission reports for any calendar quarter during which there are excess emissions from the #2 Package Boiler. If there are no excess emissions during the calendar quarter, the facility shall submit a semiannual report stating that no excess emissions occurred during the semiannual reporting period. [§60.49b(h)(2)]
- I. The facility shall retain all required records for the #2 Package Boiler for a period of 2 years following the date of such record. [60.49b(o)]

SN-17

Tall Oil Plant Reactor

Source Description

The tall oil reactor operates on a batch basis. Each batch takes about 1 hour to cook and 3 hours to transfer. Maximum tall oil production is 5 tons/hr. This source was installed in 1982.

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 complying with Specific Condition #107. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	5.9	15.0
TRS	0.21	0.30

106. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #107. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	0.12	0.17
Methanol	0.47	0.70
Phenol	0.10	0.14

- 107. The production or processing of Tall Oil shall be limited to 15,012 tons per consecutive twelve month period. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 108. The facility shall maintain records of production or processing of Tall Oil to demonstrate compliance with Specific Condition #107. Records for these annual rates are to be maintained on a twelve month rolling total and updated monthly. Such records shall be maintained on site and made available to the Department upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. Failure to comply with these conditions shall be considered a violation of the mass emission limit. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-23 Blow Heat Emergency Vent, Batch Digesters

Source Description

Product and pressured gases from the digesters are released to atmospheric pressure in the blow tanks. The emergency vent was previously permitted as SN-16; however, as releases from this source are made only in emergency situations, it is not a normal source of emissions.

There are five Batch Digesters located at the facility. Batch Digesters #1 and #2 were installed in 1965, #3 and #4 in 1974, and #5 in 1987. Batch Digester #2 was repaired in 1996. In the Batch Digesters, wood chips and sawdust are cooked to separate the wood fiber from the lignin that binds the fibers together.

The Batch Digesters use the NCG/LVHC Collection System to control emissions of VOC. Without the NCG/LVHC Collection System in operation, VOC emissions would be greater than 100 tons per year. Therefore, this is a listed unit for CAM. However, the Batch Digesters are subject to 40 CFR Part 63, Subpart S with an effective date of April 15, 2001. Therefore, the Batch Digesters are exempt from the requirements of CAM.

Specific Conditions

109. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #111 and #134. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	1.9	15.0
TRS	0.32	9.0

110. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #111 and #134. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetaldehyde	0.04	0.15
Methanol	0.77	2.83

- Batch Digester #5 is an affected source of 40 CFR Part 60, Subpart BB-Standards of Performance for Kraft Pulp Mills. [§19.304 of Regulation #19 and 40 CFR Part 60, Subpart BB]
 - A. The gases from the #5 Batch Digestor shall be combusted with other waste gases in the incinerator, lime kiln, or recovery furnace. They shall be incinerated at a minimum temperature of 1200°F for a minimum of 0.5 seconds. [§60.283(a)(1)(iii)]
 - B. The facility shall install, calibrate, maintain and operate a continuous monitoring device for the digester (SN-23) which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from the digester system. The monitoring device is to be certified by the manufacturer to be accurate within ± 1 percent of the temperature being measured. [§60.284(b)(1)]
 - C. The facility shall report semiannually periods of excess emissions. For the digester system, periods of excess emissions are all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200°F. As in §60.284(e)(2), excess emissions reported shall not be a violation of §60.11(d) provided that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions. [§60.284(d)(3)(ii)]

SN-24

Wood Yard Fugitives

Source Description

Wood yard activities at the mill are classified as the unloading of wood chips and wood waste at the two receiving dumps, material drop points, stacking and removing material to and from storage piles, wind erosion from storage piles, and road emissions. Chips are sent to the semicircular chip pile by means of a belt conveyor. Then, chips are recovered with a reclaim conveyor that follows the contour of the pile. The chips will go through a chip thickness screening system which consists of a scalping screen, a primary screen, an air density separator, chip conditioner, and a fines screen. After the screening system, the chips will be conveyed to a chip silo, to the digester, or to the chip pad.

Specific Conditions

112. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #116 and #120. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.8	1.0
VOC	202.5	887.0

113. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #116 and #120. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
РМ	1.6	2.2

SN-25A

#1 Paper Machine

Source Description

The #1 Paper Machine was installed in 1965. At the paper machine, pulp is formed into a sheet, drained and pressed for dewatering, and then dried with steam heated dryers.

Specific Conditions

114. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #116. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	31.4	110.0

115. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #116. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	0.90	3.20
Acetaldehyde	4.99	17.46
Acrolein	0.18	0.59
Benzene	0.03	0.11
Biphenyl	0.06	0.20
Methanol	25.57	89.47
Methyl Isobutyl Ketone	0.10	0.33
Phenol	0.03	0.10
Styrene	0.06	0.19
Toluene	0.10	0.35
Trichloroethylene	0.15	0.51
m, p Xylene	0.07	0.23

Pollutant	lb/hr	tpy
o Xylene	0.06	0.20

- 116. The yearly production rate of the #1 Paper Machine shall be limited to 301,750 air dried tons of finished paper and the use of 170,683 tons of bone dried kraft pulp (55% of 310,333 bone dried tons pulp) based on a rolling twelve month total. The amount of kraft tons each month will be a calculated amount from the total amount of kraft pulp sent to either paper machine (SN-25A & SN-25B). [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 117. The permittee shall maintain records of the production rate and kraft pulp use of the #1 Paper Machine. These records shall be updated at least monthly, shall be kept on site, and shall be provided to Department personnel upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
SN-25B

#2 Paper Machine

Source Description

The #2 Paper Machine was installed in 1978 and modified in 1998. At the paper machine, pulp is formed into a sheet, drained and pressed for dewatering, and then dried with steam heated dryers.

Specific Conditions

118. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #120. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	26.2	83.7

119. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with 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]

Pollutant	lb/hr	tpy
Acetone	0.74	2.58
Acetaldehyde	4.16	14.29
Acrolein	0.15	0.52
Benzene	0.03	0.10
Biphenyl	0.05	0.15
Methanol	21.31	73.25
Methyl Isobutyl Ketone	0.09	0.30
Phenol	0.03	0.07
Styrene	0.05	0.17
Toluene	0.09	0.29
Trichloroethylene	0.13	0.46

Pollutant	lb/hr	tpy
m, p Xylene	0.06	0.20
o Xylene	0.05	0.18

- 120. The yearly production rate of the #2 Paper Machine shall be limited to 248,500 air dried tons of finished paper and the use of 139,650 tons of bone dried kraft pulp (45% of 310,333 tons of bone dried pulp) based on a rolling twelve month total. The amount of kraft tons each month will be a calculated amount from the total amount of kraft pulp sent to either paper machine (SN-25A & SN-25B). [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 121. The permittee shall maintain records of the production rate and kraft pulp use of the #2 Paper Machine. These records shall be updated at least monthly, shall be kept on site, and shall be provided to Department personnel upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-26 and SN-27 Basement Air Make-up Heaters #1 and #2

Source Description

The Basement Air Make-up Heaters #1 and #2 (SN-26 and SN-27) are both 10 MMBTU/hr natural gas fired heaters. They were installed in 1967.

Specific Conditions

122. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #125. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

SN	Pollutant	lb/hr	tpy
	PM ₁₀	0.1	0.4
	SO ₂	0.1	0.1
26	VOC	0.1	0.3
	СО	0.8	3.6
	NO _X	1.0	4.3
	PM ₁₀	0.1	0.4
	SO ₂	0.1	0.1
27	VOC	0.1	0.3
	СО	0.8	3.6
	NO _X	1.0	4.3

123. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #125. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Pollutant	lb/hr	tpy
26	РМ	0.1	0.4
27	PM	0.1	0.4

- 124. Visible emissions from these sources shall not exceed 5% opacity as measured by EPA Reference Method 9. Compliance will be demonstrated by only burning natural gas. [§18.501 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]
- 125. The #1 and #2 Basement Air Make-Up Heaters shall only use natural gas as a fuel source. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

SN-30

Landfill

Source Description

The landfill at Green Bay is separated into two areas. Landfill 2 (Area I and II), which operated from 1981 to 1999, has a design capacity of 1,121,750 yd³. Landfill 3, Phase 1 has a design capacity of 449,000 yd³. It was filled in 2002. Landfill 3, Phase 2 was filled in 2008. It has a design capacity of 425,000 yd³. Landfill 3, Phase 3 has a capacity of 376,000 yd³. Currently, waste is being put into Landfill 3 Phase 3. Phase 4 will be used when Phase 3 is filled. Pulp mill landfills provide a poor environment for formation and release of gases because of low nitrogen content, high moisture and waste with high pH levels.

Specific Conditions

126. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #128. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	1.9	8.3

127. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #128. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methane	159.73	699.60

- 128. Annual waste acceptance rate for the landfill shall not exceed 489,000 cubic yards uncompacted waste per year as calculated on a twelve month rolling total. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 129. The facility shall record the amounts of waste received in the landfill. 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 be submitted in accordance with General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

- 130. Landfill 2 (Area I and II) and Landfill 3, Phase 1 and Phase 2 are filled and covered and shall no longer accept waste. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 52, Subpart E]
- 131. The landfill is not an affected facility of 40 CFR Part 60, Subpart WWW-Standards of Performance for Municipal Solid Waste Landfills because it does not contain household waste. [§19.304 of Regulation #19 and 40 CFR Part 60, Subpart WWW]

SN-31 Weak Black Liquor Tanks

Source Description

Weak Black Liquor is a product of the pulping process. It consists of compounds of dissolved and reacted lignin, organic and inorganic compounds that contain sulfur, and unreacted sodium hydroxide and sodium sulfide. Weak Black Liquor is contained in the vessels listed in the table below.

Equipment Number	Vessel	Capacity (gallon)
0467	Weak Black Liquor Boil Out Tank	750,000
0470	Blend Tank	18,426
0472	Screen Accepts Tank	18,426
0474	Weak Black Liquor Storage Tank	1,055,016

Specific Conditions

132. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #134. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	3.5	15.4
TRS	0.44	1.93

133. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #134. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	0.07	0.28

- 134. A throughput limit of 310,333 bone dried tons of Kraft pulp at the facility per consecutive twelve month period shall be considered compliance with emission limits for this source. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
- 135. The permittee shall maintain records of the throughput of bone dried Kraft pulp at the facility. Records shall be updated monthly, maintained on site and made available to the Department upon request. A twelve month total and each month's individual data shall be submitted in accordance with General Provision #7. Failure to comply with these conditions shall be considered a violation of the mass emissions limit. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-32 Green Liquor Tanks

Source Description

Green Liquor is formed from the dissolved molten salts or smelt from the recovery boiler. It is contained in the vessels listed in the table below.

Equipment Number	Vessel	Capacity (gallons)
0786	#1 Green Liquor Clarfier (North)	47,377
0724	#2 Green Liquor Clarifier (South)	47,377
0729A	#1 Green Liquor Storage Tank (North)	54,147
0729B	#2 Green Liquor Storage Tank (South)	54,147
0709	Green Liquor Blend Tank	26,632
0743	Extra Clarfier/Washer Tank	69,177

Specific Conditions

136. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #134. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.3	34.2
TRS	0.26	1.14

137. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #134. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	0.08	0.34

SN-36

Slaker/Causticizers

Source Description

Green liquor from the Green Liquor Clarifier and lime from the Lime Silos are mixed together in the Slaker. The solution of lime and green liquor overflows into two causticizers in series. In these causticizers, calcium hydroxide reacts with sodium carbonate to form sodium hydroxide and calcium carbonate. These components are pumped onto the white liquor clarifier. The insoluble calcium carbonate settles out and is sent back to the lime kilns for conversion to calcium oxide. The liquid portion in the clarifier is white liquor that goes to the digesters to digest wood chips. A scrubber with spray nozzles scrubs the vapors produced from the slacker with a spray of weak wash. Vapors from the overflow of the causticizers go into the standpipe that allows the release of emissions to atmosphere. Process rate is limited by the lime processing rate of the lime kilns at a rate of 84,950 tons per year.

Specific Conditions

138. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #140. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	1.2	7.0

139. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Condition #140. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetaldehyde	0.59	2.29
Acetone	0.21	0.82
Ammonia	4.84	18.69
Methanol	0.59	2.27

140. The throughput of lime through the Slaker system shall not exceed 84,950 tons during any consecutive twelve month period. Compliance for this condition is shown by maintaining records of lime usage outlined in Specific Condition #71. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

SN-37 LVHC Collection System

Source Description

Pulping wood releases numerous HAP compounds that do not condense out in other processes. The non-condensable gases are collected and sent to the #2 Lime Kiln (SN-09) or to the NCG Incinerator (SN-22) for incineration. The LVHC system collects HAPs from the Turpentine Recovery process, the Digester Blow System, and the Evaporator System. Emissions listed for this source are from releases due to the opening of the bypass vent. Emissions listed for this system include releases from the system due to startup, shutdown and malfunction conditions in the LVHC System, from the LVHC Collection System and from the control equipment used to reduce total HAP emissions, and 1% of process time as provided at §63.443(e)(1). The remaining emissions are sent to the control devices and incinerated.

The LVHC/NCG Collection System collects all of the non-condensable gases emitted from the digester system, the turpentine recovery system, and the evaporator system. These gases are transported through the collection system to be incinerated in the #2 Lime Kiln (SN-09) and the NCG Flare (SN-22). Without the use of the kiln and flare as control devices, the emission of HAPs and TRS gases would exceed the 25 ton per year threshold for HAPs and the 100 tons per year for VOCs. Therefore, this is a listed unit for CAM. However, the LVHC/NCG Collection System is subject to 40 CFR Part 63, Subpart S with an effective date of April 15, 2001. Therefore, the LVHC/NCG Collection System is exempt from the requirements of CAM.

Specific Conditions

141. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #146 and #147. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	12.9	1.1
TRS	4.90	0.43

142. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #144, #146 and #147. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methanol	12.92	1.13

- 143. The total HAP emissions from this source shall be controlled no later than April 16, 2001. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.443(a)(1)(i) and §63.440(d)]
- 144. The LVHC System sources shall be enclosed and vented into a closed-vent system and routed to a control device that reduces total HAP emissions using the #2 Lime Kiln (SN-08) and/or the NCG Incinerator (SN-22). [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.443(c) and §63.443(d)(4)]
- 145. A record will be kept of all required maintenance activities performed on the LVHC System control devices. [§63.10(b)(2)(iii)]
- 146. 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. [§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). [§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: [§63.450(d)]

- 1. On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications, a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line. In loop seals, temperature measurement is an acceptable method of demonstrating gas flow.
- 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.
- D. The closed-vent LVHC Collection System shall comply with the following requirements: [§63.453(k)]
 - 1. 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 closed position and sealed. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(1)]
 - 2. 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. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(2)]
 - 3. 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): [§63.453(k)(3)]
 - a. Method 21, of Part 60, appendix A;
 - b. 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;
 - 1. Zero air (less than 10 parts per million by volume of hydrocarbon in air) and;

- 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.
- 4. 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): [§63.453(k)(4),]
 - a. An anemometer to demonstrate flow into the enclosure opening;
 - b. Measure the static pressure across the opening;
 - c. Smoke tubes to demonstrate flow into the enclosure opening;
 - d. Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.
- 5. The valve or closure mechanism 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. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(5),]
- 6. 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: [§63.453(k)(6)]
 - 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. 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.

- 7. Closed vent systems, fixed roofs, covers, or enclosures are exempt from the 30 day and annual inspection requirements, provided that the source or operator determines:
 - a. Persons conducting the inspection would be exposed to an imminent or potential danger, or
 - b. Equipment could not be inspected without elevating the individual higher than 6 feet above or beyond the work platform, walkway, or catwalk.

The source or operator shall identify all exempted equipment and explain how the equipment will be inspected during safe-to-inspect periods. The inspection frequency shall be at least once every five calendar years.

- E. For each applicable enclosure opening, closed-vent system, and closed collection system under Specific Condition #146(D), 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: [§63.454(b),]
 - a. Date of inspection;
 - b. The equipment type and identification;
 - c. Results of negative pressure tests for enclosures;
 - d. Results of leak detection tests;
 - e. The nature of the defect or leak and the method of detection (i.e. visual inspection or instrument detection);
 - f. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
 - g. Repair methods applied in each attempt to repair the defect or leak;
 - h. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
 - i. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
 - j. The date of successful repair of the defect or leak;

- k. The position and duration of the opening of bypass line valves and the condition of any valve seals; and
- 1. The duration of the use of bypass valves on computer controlled valves.
- 147. 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. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.453(o), except as provided in §63.443(e)]
- 148. An excess emission and continuous monitoring system performance report shall be submitted to the EPA and to the Department semi-annually. For the LVHC system, this report will include: [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.10(e)(3)(i)]
 - A. Periods when any bypass valve is open while the vented source is in operation;
 - B. Periods when the temperature in the NCG Incinerator falls below 1600°F while combusting HAPs.
- 149. Periods of excess emissions at the LVHC System shall not be a violation provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed one percent. If the one percent limit is exceeded, the release is considered an Upset Condition under Regulation #19 and must be reported immediately. These periods are detailed in Specific Condition #148. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.443(e)(1)]

SN-38 HVLC Collection System

Source Description

The HVLC Collection System collects vapors from the Brownstock washers, all of the required tanks associated with the washers, and the Condensate Collection Tank. It consists of hoods that cover the drums of the washers, lines from the hoods and tanks, a condenser to reduce moisture, a fan and a line into the incineration control device. The incineration occurs at the #3 Wood Waste Boiler (SN-04) with the #1 Wood Waste Boiler (SN-02) as a backup. Emissions listed for this system include releases from the system due to startup, shutdown and malfunction conditions in the HVLC System, from the HVLC Collection System and from the control equipment used to reduce total HAP emissions and 4% of process time as provided at §63.443(e)(2). The remaining emissions are sent to the control devices and incinerated.

The HVLC Collection System collects all of the non-condensable gases emitted from the Brownstock Washer system and portions of the condensate collection system. These gases are transported through the collection system to be incinerated in the #3 Wood Waste Boiler (SN-04) and the #1 Wood Waste Boiler (SN-02). Without the use of the two boilers as control devices, the emissions of HAPS and VOC gases would exceed the 25 ton per year threshold for HAPs and the 100 tons per year for VOCs. Therefore, this is a listed unit for CAM. However, the HVLC Collection System is subject to 40 CFR Part 63, Subpart S with an effective date of April 15, 2001. Therefore, the HVLC Collection System is exempt from the requirements of CAM.

Specific Conditions

150. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #155 and #156. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	1.9	0.7
TRS	18.72	7.10

151. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #155 and #156. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	1.20	0.40
Methanol	1.92	0.65

- 152. The compliance date for the HVLC system shall be no later than April 16, 2006. However, since it is being used to meet the requirements of §63.446(e)(1), the total HAP emissions from the HVLC system shall be controlled no later than April 16, 2001. [§19.304 of Regulation #19 and 40 CFR Part 60, Subpart S, §63.440(d)(1) and §63.443(a)(1)(ii)(A) and (iii)]
- 153. The HVLC System sources shall be enclosed and vented into a closed-vent system and routed to a control device that reduces total HAP emissions using the #3 Wood Waste Boiler (SN-04) and the #1 Wood Waste Boiler (SN-02). [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.443(c) and §63.443(d)(4)]
- 154. A record will be kept of all required maintenance activities performed on the HVLC System control devices. [§63.10(b)(2)(iii)]
- 155. 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. [§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). [§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: [§63.450(d)]
 - 1. On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer's specifications, a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line. In loop seals, temperature measurement is an acceptable method of demonstrating gas flow.
 - 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.
- D. The closed-vent HVLC Collection System shall comply with the following requirements: [§63.453(k)]
 - 1. 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 closed position and sealed. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(1)]
 - 2. 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. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(2)]
 - 3. 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): [§63.453(k)(3)]
 - a. Method 21, of Part 60, appendix A;
 - b. 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;

- 1. Zero air (less than 10 parts per million by volume of hydrocarbon in air) and;
- 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.
- 4. 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): [§63.453(k)(4)]
 - a. An anemometer to demonstrate flow into the enclosure opening;
 - b. Measure the static pressure across the opening;
 - c. Smoke tubes to demonstrate flow into the enclosure opening;
 - d. Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.
- 5. The valve or closure mechanism 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. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(5)]
- 6. 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: [§63.453(k)(6)]
 - 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. 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.
- 7. Closed vent systems, fixed roofs, covers, or enclosures are exempt from the 30 day and annual inspection requirements, provided that the source or operator determines:
 - a. Persons conducting the inspection would be exposed to an imminent or potential danger, or
 - b. Equipment could not be inspected without elevating the individual higher than 6 feet above or beyond the work platform, walkway, or catwalk.

The source or operator shall identify all exempted equipment and explain how the equipment will be inspected during safe-to-inspect periods. The inspection frequency shall be at least once every five calendar years.

- E. For each applicable enclosure opening, closed-vent system, and closed collection system under Specific Condition #155(D), 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: [§63.454(b)]
 - a. Date of inspection;
 - b. The equipment type and identification;
 - c. Results of negative pressure tests for enclosures;
 - d. Results of leak detection tests;
 - e. The nature of the defect or leak and the method of detection (i.e. visual inspection or instrument detection);
 - f. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
 - g. Repair methods applied in each attempt to repair the defect or leak;

- h. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
- i. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
- j. The date of successful repair of the defect or leak;
- k. The position and duration of the opening of bypass line valves and the condition of any valve seals; and
- 1. The duration of the use of bypass valves on computer controlled valves.
- 156. 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. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.453(o), except as provided in §63.443(e)(2)]
- 157. An excess emission and continuous monitoring system performance report shall be submitted to the EPA and to the Department semi-annually. For the HVLC system, this report will include: [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.10(e)(3)(i)]

A. Periods when any bypass valve is open while the vented source is in operation.

158. Periods of excess emissions at the HVLC System shall not be a violation provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed four percent. If the four percent limit is exceeded, the release is considered an Upset Condition under Regulation #19 and must be reported immediately. These periods are detailed in Specific Condition #157. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.443(e)(2)]

SN-39 Pulping Process Condensate Collection

Source Description

The Pulping Process Condensate Collection System collects the condensates and recycles them while the gases are sent through a closed system for control. The treatment system here is to recycle the condensates to the Brownstock Washers (SN-11) as shower water as required under 40 CFR Part 63, Subpart S, §63.446(e)(1). Because the condensate is recycled to SN-11, and the non-condensable gases are sent to HVLC system for control, there are no emissions from this source.

The Condensate Collection System collects process condensates containing large concentrations of HAPs and VOCs. The condensates are recycled to the Brown Stock Wasters where emissions are controlled through the HVLC Collection System. Emissions from the Condensate Collection Tank are also controlled through the HVLC Collection System. Without the use of the HVLC Collection System as a control device, the emissions of HAPS and VOC gases would exceed the 25 ton per year threshold for HAPs and the 100 tons per year for VOCs. Therefore, this is a listed unit for CAM. However, the Pulping Process Condensate Collection System is subject to 40 CFR Part 63, Subpart S with an effective date of April 15, 2001. Therefore, the HVLC Collection System is exempt from the requirements of CAM.

Specific Conditions

- 159. The pulping process condensates from the following equipment systems shall be treated to meet the requirements set forth in Specific Condition #160 through #167: [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.446(b)]
 - A. Each digester system;
 - B. Each turpentine recovery system;
 - C. Each evaporator stage where weak liquor is introduced (feed stages) in the evaporator system;
 - D. Each HVLC collection system;
 - E. Each LVHC collection system; and
 - F. The evaporator vacuum system.

- 160. Pulping process condensates from equipment systems listed in Specific Condition #159 shall be collected in a sufficient amount where the total HAP mass is at least 7.2 pounds of total HAP per ton of oven dried pulp based on the averaging period developed in Specific Condition #167. Testing will be performed in accordance with Specific Condition #161. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.446(c)(3)]
- 161. The owner or operator shall measure the total HAP concentration as methanol using EPA Reference Method #305 or NCASI Direct Injection Method DI/MOE 94.02. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.457(g)]
- 162. An initial performance test is required for the condensate collection system in order to demonstrate compliance with Specific Condition #160. The test must be conducted before October 16, 2001. Notification of the test date will be given to the EPA and to the Department within 60 days before the test is scheduled to begin. This report was submitted to ADEQ on November 16, 2001. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.457(a)]
- 163. The condensate tank located within the closed collection system must meet the following requirements: [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §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 #146 for the HVLC system and routed to a control device that meets the conditions of Specific Condition #23 for the #3 Wood Waste Boiler and/or Specific Condition #10 for the #1 Wood Waste Boiler (SN-02).
 - 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.

- 164. The closed condensate system shall meet the requirements specified in §63.453(a) CMS Requirements; §63.453(k)-Monitoring Requirements; and §63.454(b)-Recordkeeping Requirements. The closed condensate system consists of the lines, pumps, meters, valves and drains between the condensate storage tank and the Brownstock washer showers. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.453(1)]
 - A. The condensate collection tank shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in §63.457(e). Each enclosure 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. [§63.450(b)]
 - B. Each component of the closed condensate 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). [§63.450(c)]
 - C. Each drain valve or loop seal in the closed condensate system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations shall comply with either of the following requirements: [§63.450(d)]
 - 1. On each drain valve or loop seal, 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 line at least once every 15 minutes. The flow indicator shall be installed in the line in such a way as to indicate flow in the line. In loop seals, temperature measurement is an acceptable method of demonstrating gas flow.
 - 2. For drain valves that are not computer controlled, the owner or operator shall maintain the drain 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.
 - 3. A continuous record shall be kept of valve position. This record shall be kept in a form suitable for review upon request and shall be kept for at least five years.

- D. The condensate collection system shall comply with the following requirements: [\$63.453(k)]
 - 1. 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 closed position and sealed. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(1)]
 - 2. Each collection 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. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(2)]
 - 3. Each opening and line in the condensate collection system shall demonstrate no detectable leaks measured initially and annually by complying with the following procedures found in §63.457(d): [§63.453(k)(3)]
 - a. Method 21, of Part 60, appendix A;
 - b. 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;
 - 1. Zero air (less than 10 parts per million by volume of hydrocarbon in air) and;
 - 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.
 - 4. Demonstrate initially and annually that each condensate collection tank opening is maintained at negative pressure by using one of the following procedures found in 63.457(e): [63.453(k)(4)]
 - a. An anemometer to demonstrate flow into the enclosure opening;
 - b. Measure the static pressure across the opening;
 - c. Smoke tubes to demonstrate flow into the enclosure opening;

- d. Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.
- 5. The valve or closure mechanism 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. Inspections shall be conducted once during each calendar month, with any two consecutive inspections being at least 21 calendar days apart. [§63.453(k)(5)]
- 6. 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: [§63.453(k)(6)]
 - 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. 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.
- 7. Closed vent systems, fixed roofs, covers, or enclosures are exempt from the 30 day and annual inspection requirements, provided that the source or operator determines:
 - a. Persons conducting the inspection would be exposed to an imminent or potential danger, or
 - b. Equipment could not be inspected without elevating the individual higher than 6 feet above or beyond the work platform, walkway, or catwalk.

The source or operator shall identify all exempted equipment and explain how the equipment will be inspected during safe-to-inspect periods. The inspection frequency shall be at least once every five calendar years.

- E. For each applicable enclosure opening, closed-vent system, and closed collection system under Specific Condition #164(D), 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: [§63.454(b)]
 - a. Date of inspection;
 - b. The equipment type and identification;
 - c. Results of negative pressure tests for enclosures;
 - d. Results of leak detection tests;
 - e. The nature of the defect or leak and the method of detection, i.e. visual inspection or instrument detection;
 - f. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
 - g. Repair methods applied in each attempt to repair the defect or leak;
 - h. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
 - i. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
 - j. The date of successful repair of the defect or leak;
 - k. The position and duration of the opening of bypass line valves and the condition of any valve seals; and
 - 1. The duration of the use of bypass valves on computer controlled valves.
- 165. In order to meet the requirements of Specific Condition #166 (A -G), the owner or operator shall install, calibrate, certify, operate and maintain according to the manufacturer's specifications, a continuous monitoring system. The CMS shall include a continuous recorder. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.453(a)]

- 166. A CMS shall be operated to measure the flow of collected condensate streams, flow of pulp and pulp consistency. The flows to be measured, monitored and recorded with a CMS are the ones tested in the Initial Performance Test and used to demonstrate collection of 7.2 pounds of HAP per ton of oven dried pulp produced. This includes: [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.453(i) and (n)]
 - A. Condensate from the condensate collection tank to the Brown Stock washer showers:
 - B. Fresh water flow into the condensate collection tank;
 - C. Flow of pulp stock to the Brownstock washers;
 - D. Consistency of pulp to the Brownstock washers will be measured once a day manually, or by installing a continuous consistency meter that outputs to a continuous recorder;
 - E. Mass (in pounds) of HAP to the Brownstock washers;
 - F. Mass (in tons) of oven dried pulp produced (in order to calculate the daily oven dried pulp production, a daily rolling average using pulp consistency will be used);
 - G. Mass (in pounds) of HAP treated per bone dried ton of pulp produced.
- 167. The permittee shall maintain daily records which demonstrate compliance with Specific Condition #166(A-G). A rolling average of each parameter in Specific Condition #166(A-G) shall be used to calculate daily compliance of collection and treatment of 7.2 pounds of HAP per bone dry tons of pulp. The averaging period for each calculation will be based on the results from the Initial Performance Test and any subsequent tests. Records shall be updated by the fifteenth day of the month following the month to which the records pertain and shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 168. 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 in Specific Conditions #159 through #167 shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions. [§19.304 of Regulation #19 and 40 CFR Part 63, Subpart S, §63.453(0)]

SN-40

Mill Road Fugitives

Source Description

Traffic on paved and unpaved roadways on the site property can create fugitive dust emissions as PM_{10} . These emissions are calculated based on vehicular traffic, the actual distance traveled, site operating hours and control measures (i.e. water of roads).

Specific Conditions

169. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #171. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	17.9	39.6

170. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #171. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
РМ	58.4	169.7

171. Dust suppression activities should be conducted in a manner and at a rate of application that will not cause runoff from the area being applied. Best Management Practices (40 CFR §122.44(k)) should be used around streams and waterbodies to prevent the dust suppression agent from entering Waters of the State. Except for potable water, no agent shall be applied within 100 feet of wetlands, lakes, ponds, springs, streams, or sinkholes. Failure to meet this condition may require the permittee to obtain a National Pollutant Discharge Elimination System (NPDES) permit in accordance with 40 CFR §122.1(b). [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN-41, SN-42, SN-43 Emergency Fire Water Pump Engine Recovery Elevator Drive Engine Emergency Lime Kiln Drive Engine

Source Description

SN-41 is a 160-hp, diesel fired, emergency fire pump engine built by Detroit Diesel Allison Division, in 1984. SN-42 is a 207-hp, diesel fired, emergency Recovery Elevator drive engine built by Cummins Engine in 1989. SN-43 is a 75-hp, diesel fired, emergency lime kiln drive engine built by Deutz in 2006. Each engine is subject to 40 CFR 63, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal combustion Engines (RICE) (Subpart ZZZZ).

Specific Conditions

172. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #174 and #186. [Regulation 19 §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Pollutant	lb/hr	tpy
	PM ₁₀	0.4	0.1
	SO ₂	0.4	0.1
41	VOC	0.4	0.1
	СО	1.1	0.3
1	NO _x	5.0	1.3
	PM ₁₀	0.5	0.2
	SO_2	0.5	0.2
42	VOC	0.5	0.2
	СО	1.4	0.4
	NO _x	6.5	1.6
	PM ₁₀	0.2	0.1
43	SO ₂	0.2	0.1
	VOC	0.2	0.1
	СО	0.5	0.2
	NO _x	2.4	0.6

173. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #174 and #186. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Pollutant	lb/hr	tpy
	PM	0.4	0.1
	Acetaldehyde	8.59E-04	3.76E-03
	Acrolein	1.04E-04	4.54E-04
	Benzene	1.04E-04	4.58E-03
41	1,3 Butadiene	4.38E-05	1.92E-04
	Formaldehyde	1.32E-03	1.92E-04 5.79E-03
	Naphthalene	9.50E-05	4.16E-04
	Propylene	2.89E-03	4.10E-04 1.27E-02
	Toluene	4.58E-04	2.01E-03
	PM	0.5	0.2
		1.11E-03	0.2 4.87E-03
	Acetaldehyde		
	Acrolein	1.34E-04	5.87E-04
10	Benzene	1.35E-03	5.92E-03
42	1,3 Butadiene	5.67E-05	2.48E-04
	Formaldehyde	1.71E-03	7.49E-03
	Naphthalene	1.23E-04	5.38E-04
	Propylene	3.74E-03	1.64E-02
	Toluene	5.93E-04	2.60E-03
	PM	0.2	0.1
	Acetaldehyde	4.03E-04	1.76E-03
	Acrolein	4.86E-05	2.13E-04
	Benzene	4.90E-04	2.15E-03
43	1,3 Butadiene	2.05E-05	8.99E-05
	Formaldehyde	6.20E-04	2.71E-03
	Naphthalene	4.45E-05	1.95E-04
	Propylene	1.35E-03	5.93E-03
	Toluene	2.15E-04	9.40E-04

- 174. The permittee shall not exceed 20% opacity from SN-41, SN-42, and SN-43 as measured by EPA Reference Method 9. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Condition 177. [Regulation 18, §18.501, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 175. The permittee shall not operate the emergency engines SN-41, SN-42, and SN-43 in excess of 500 hours each per calendar year. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

- 176. The permittee shall maintain monthly and annual records to demonstrate compliance with Specific Condition #175. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. A twelve month calendar total and each individual month's data shall be in a spreadsheet, database, or other well-organized format, maintained on site, made available to Department personnel upon request and submitted in accordance with General Provision #21. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 177. The permittee shall conduct annual visible emissions observations as a method of compliance verification for the opacity limit assigned for SN-41, SN-42, and SN-43. Observations shall be conducted by someone trained in EPA Reference Method 9. If during the observations, visible emissions are detected which appear to be in excess of the permitted opacity limit, the permittee shall:
 - 1. Take immediate action to identify the cause of the visible emissions,
 - 2. Implement corrective action, and
 - 3. If excessive visible emissions are still detected, an opacity reading shall be conducted in accordance with EPA Reference Method 9 for point sources and in accordance with EPA Method 22 for non-point sources. This reading shall be conducted by a person trained and certified in the reference method. If the opacity reading exceeds the permitted limit, further corrective measures shall be taken.
 - 4. If no excessive visible emissions are detected, the incident shall be noted in the records as described below.
- 178. The permittee shall maintain records related to all visible emission observations and Method 9 readings. These records shall be updated on an as-performed basis. These records shall be kept on site and made available to Department personnel upon request. These records shall contain:
 - 1. The time and date of each observation/reading,
 - 2. Any observance of visible emissions appearing to be above permitted limits or any Method 9 reading which indicates exceedance,
 - 3. The cause of any observed exceedance of opacity limits, corrective actions taken, and results of the reassessment, and
 - 4. The name of the person conducting the observation/reading.
- 179. The permittee shall meet the following requirements of Table 2c of 40 CFR Part 63 Subpart ZZZZ:
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first.
 - b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6602]

180. The permittee shall operate and maintain SN-41, SN-42, and SN-43 according to the manufacturer's emission-related written instructions or develop maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in

a manner consistent with good air pollution control practice for minimizing emissions. [Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6625(e)(2)]

- 181. The permittee shall install a non-resettable hour meter if one is not already installed at SN-41, SN-42, and SN-43, by May 3, 2013. [Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6625(f)]
- 182. The permittee shall minimize the engines (SN-41, SN-42, and SN-43) time spent at idle during startup and minimize the engines startup time to a period needed for appropriate and safe loading of the engines, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2c of 40 CFR Part 63 Subpart ZZZZ apply. [Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6625(h)]
- 183. The permittee may operate the emergency stationary RICE (SN-41, SN-42, and SN-43) for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. SN-41, SN-42, and SN-43 may be operated up to 50 hours per year in non-emergency situations, but those hours per year are counted towards the 100 hours per year provided for maintenance and testing. The hours cannot be used for peak shaving or to generate income for the facility to supply power to the electric grid or otherwise supply power as part of a financial arrangement with another There are no time limits for the use of an emergency stationary RICE in entity. emergency situations. The engines may not be operated for more than 30 minutes prior to the time when the emergency conditions expected to occur, and the engines operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. [Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6640(f)(1)(i, ii, iii)]
- 184. The permittee shall keep records of the maintenance conducted on SN-41, SN-42, and SN-43 in order to demonstrate that they were operated and maintained according to the maintenance plan. [Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6655(e)(2)]
- 185. The permittee shall keep records of the hours of operation of the engines that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, records of notification of the emergency situation, and the time the engines were operated as part of demand response. [Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6655(f)(1)]
- 186. The permittee shall maintain files of all information required by 40 CFR Part 63 Subpart ZZZZ recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each

occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. [Regulation No. 19 §19.304 and 40 CFR Part 63, Subpart ZZZZ, §63.6660]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Green Bay Packaging Inc. (Arkansas Kraft Division) 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 otherwise 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:
 - 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.

[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]

- 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 operate all Continuous Emissions Monitors in accordance with the Continuous Emission Monitoring Systems Conditions in Appendix E. [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Acid Rain (Title IV)

9. The Director prohibits the permittee to cause any emissions exceeding any allowances the source lawfully holds under Title IV of the Act or the regulations promulgated under the Act. No permit revision is required for increases in emissions allowed by allowances acquired pursuant to the acid rain program, if such increases do not require a permit revision under any other applicable requirement. This permit establishes no limit on the number of allowances held by the permittee. However, the source may not use allowances as a defense for noncompliance with any other applicable requirement of this permit or the Act. The permittee will account for any such allowance according to the procedures established in regulations promulgated under Title IV of the Act. A copy of the facility's Acid Rain Permit is attached in an appendix to this Title V permit. [Regulation 26, §26.701 and 40 CFR 70.6(a)(4)]

Title VI Provisions

- 10. The permittee must comply with the standards for labeling of products using ozonedepleting 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 placem ent 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.
- 11. 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 t he 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.
- 12. 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.
- 13. 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.

14. 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.

Permit Shield

15. 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 February 6, 2009.

Source No.	Regulation	Description	
Facility	Regulation 19	Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective October 15, 2007	
Facility	Regulation 26	Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002	
SN-04 and SN-15	40 CFR 60, Subpart Db	New Source Performance Standards for Industrial Steam Generating Units, effective December 16, 1987	
Facility	40 CFR 60, Subpart BB	New Source Performance Standards for Kraft Pulp Mills, effective May 20, 1986	
Facility	40 CFR 61, Subpart M	National Emission Standard for Hazardous Air Pollutants for Renovation/Demolition of Asbestos	
Facility	40 CFR 63, Subpart S	National Emission Standard for Hazardous Air Pollutants from the Pulp and Paper Industry, effective April 15, 1998	
SN-05, SN-07, and SN-08	40 CFR 63, Subpart MM	National Emission Standard for Hazardous Air Pollutants for Chemical Recovery Combustion Units at Kraft Pulp Mills with a compliance date of 3/12/04.	
SN-39	40 CFR 63, Subpart RR	National Emission Standards for Individual Drain Systems, effective July 1, 1996	
SN-02, SN-11, SN- 15, SN-23, SN-37, SN-38, and SN-39	40 CFR 64	Compliance Assurance Monitoring, effective October 22, 1997	
SN-41, SN-42, SN-43	40 CFR Part 63, Subpart ZZZZ	National Emissions Standard for hazardous Air Pollutants for Reciprocating Internal Combustion Engines	

Applicable Regulations

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated January 25, 2004.

Source No.	Regulation	Description	
Facility	NSPS Subpart K	New Source Performance Standards for Petroleum Storage Tanks Less than 40,000 Gallons with Construction between 6/11/73 and 5/19/78	
Facility	NSPS Subpart Ka	New Source Performance Standards for Petroleum Storage Tanks Less than 40,000 Gallons with Construction between 5/18/78 and 7/23/84	
Facility	NSPS Subpart Kb	New Source Performance Standards for Petroleum Storage Tanks Less than 40,000 Gallons with Construction After 7/23/84	
Facility	NSPS Subpart HH	New Source Performance Standards for Lime Manufacturing	

Inapplicable Regulations

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 §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated February 6, 2009.

Description	Category	
Pocket Vent System Heater #1 (SN-28)	Group A, Number 1	
Pocket Vent System Heater #2 (SN-29)	Group A, Number 1	
DeFoamer Tank (Pulp Mill)	Group A, Number 3	
Used Oil Tank	Group A, Number 3	
North Diesel Storage Tank	Group A, Number 3	
South Diesel Storage Tank	Group A, Number 3	
Diesel Oil Storage Tank	Group A, Number 3	
50% Caustic Storage Tanks Recovery Area	Group A, Number 4	
50% Caustic Storage Tanks Tall Oil Area	Group A, Number 4	
50% Caustic Storage Tanks Secondary Recovery Area	Group A, Number 4	
Emissions From Laboratory Vents	Group A, Number 5	
Sulfuric Acid Tanks (4)	Group A, Number 13	
Small Fuel Oil Tanks (SN-33)	Group A, Number 13	
Large Fuel Oil Tank	Group A, Number 13	
Intermediate Black Liquor Storage Tanks (2)	Group A, Number 13	
Heavy Black Liquor Storage Tanks (3)	Group A, Number 13	
White Liquor Storage Tanks (4)	Group A, Number 13	
High Density Pulp Storage Tanks (2)	Group A, Number 13	
Cooling Towers	Group A, Number 13	
Salt Cake Storage Tank	Group A, Number 13	
Muriatic Acid Tote Bin	Group A, Number 13	
Tall Oil Brine Storage Tanks (3)	Group A, Number 13	

Description	Category	
Calcium Carbonate Storage	Group A, Number 13	
Alum Storage	Group A, Number 13	
Starch Cooker	Group A, Number 13	
Sludge Press Area – Vent Exhaust	Group A, Number 13	
Ferric Sulfate Storage	Group A, Number 13	
N-Sol 32 Storage	Group A, Number 13	
Secondary Fiber Plant	Group A, Number 13	
#1 Lime Silos (Sodium Carbonate) (SN-18)	Group A, Number 13	
#2 Lime Silos (Sodium Carbonate) (SN-19)	Group A, Number 13	
Starch Silo (SN-20)	Group A, Number 13	
Lime Silo – Water Plant (SN-21)	Group A, Number 13	
Turpentine Storage Tank (SN-34)	Group A, Number 13	
Turpentine Loading Operation (SN-35)	Group A, Number 13	
Gasoline Storage Tank	Group A, Number 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 & 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)]
- 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.
 - 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.

[40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]

- 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:

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

[40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

- 8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
 - a. For all upset conditions (as defined in Regulation19, § 19.601), the permittee will 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:
 - i. The facility name and location;
 - ii. The process unit or emission source deviating from the permit limit;
 - iii. The permit limit, including the identification of pollutants, from which deviation occurs;
 - iv. The date and time the deviation started;
 - v. The duration of the deviation;
 - vi. The average emissions during the deviation;
 - vii. The probable cause of such deviations;
 - viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and
 - ix. 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.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19, §19.601 and §19.602, Regulation 26, §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

- 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)]
- 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; and
 - e. 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)]
 - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
 - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
 - d. 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]
- 24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:
 - a. Such an extension does not violate a federal requirement;
 - b. The permittee demonstrates the need for the extension; and
 - c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

- 25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:
 - a. Such a request does not violate a federal requirement;
 - b. Such a request is temporary in nature;
 - c. Such a request will not result in a condition of air pollution;
 - d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
 - e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
 - f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

- 26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:
 - a. The request does not violate a federal requirement;
 - b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
 - c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[Regulation 18, §18.102(C-D), Regulation19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

APPENDIX A NSPS Subpart Db

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(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

[74 FR 5083, Jan. 28, 2009, as amended at 77 FR 9459, Feb. 16, 2012]

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 72 FR 32742, June 13, 2007, unless otherwise noted.

§60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NO_X) standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; $\S60.40$) are subject to the PM and NO_X standards under this subpart and to the sulfur dioxide (SO₂) standards under subpart D ($\S60.43$).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NO_X standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; $\S60.40$) are also subject to the NO_x standards under this subpart and the PM and SO₂ standards under subpart D ($\S60.42$ and $\S60.43$).

(c) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NO_X standards under this subpart and the SO_2 standards under subpart J or subpart Ja of this part, as applicable.

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the NO_X and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under $\S60.281$ is not considered a modification under $\S60.14$ and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

- (2) Section 60.44b(g).
- (3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is

§60.40b

subject to subpart Ea, subpart Eb, subpart AAAA, or subpart CCCC of this part is not subject to this subpart.

(i) Affected facilities (i.e., heat recovery steam generators) that are associated with stationary combustion turbines and that meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other affected facilities (i.e. heat recovery steam generators with duct burners) that are capable of combusting more than 29 MW (100 MMBtu/ h) heat input of fossil fuel. If the affected facility (i.e. heat recovery steam generator) is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, § 60.40).

(k) Any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart.

(1) Affected facilities that also meet the applicability requirements under subpart BB of this part (Standards of Performance for Kraft Pulp Mills) are subject to the SO_2 and NO_X standards under this subpart and the PM standards under subpart BB.

(m) Temporary boilers are not subject to this subpart.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 77 FR 9459, Feb. 16, 2012]

§60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels

40 CFR Ch. I (7–1–12 Edition)

listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO_2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, coke oven gas, and coalwater mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Cogeneration, also known as combined heat and power, means a facility that simultaneously produces both electric (or mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17), diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see §60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see §60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO₂ control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Gaseous fuel means any fuel that is a gas at ISO conditions. This includes, but is not limited to, natural gas and gasified coal (including coke oven gas).

Gross output means the gross useful work performed by the steam generated. For units generating only electricity, the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units, the gross useful work performed is the gross electrical or mechanical output plus 75 percent of the useful thermal output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output or to enhance the performance of the unit (*i.e.*, steam delivered to an industrial process).

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the

§60.41b

heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m³ (70,000 Btu/hr-ft³).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m³ (70,000 Btu/ hr-ft³) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or 40 CFR Ch. I (7-1-12 Edition)

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule (ng/J) or lb'MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems. For gasified coal or oil that is desulfurized prior to combustion, the Potential sulfur dioxide emission rate is the theoretical SO_2 emissions (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in a cleaned state without using any post combustion emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired

in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/ waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24hour period.

Temporary boiler means any gaseous or liquid fuel-fired steam generating unit that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period. (3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO₂ emission control, has a SO_2 emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and not located in a noncontinental area, very low sulfur oil means oil that contains no more than 0.30 weight percent sulfur or that, when combusted without SO_2 emission control, has a SO_2 emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and located in a noncontinental area, very low sulfur oil means oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO₂ emission control, has a SO₂ emission rate equal to or less than 215 ng/J (0.50 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO₂ control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO₂.

§60.42b

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 77 FR 9459, Feb. 16, 2012]

§60.42b Standard for sulfur dioxide (SO₂).

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction) and the emission limit determined according to the following formula:

$$\mathbf{E}_{s} = \frac{\left(\mathbf{K}_{a}\mathbf{H}_{a} + \mathbf{K}_{b}\mathbf{H}_{b}\right)}{\left(\mathbf{H}_{a} + \mathbf{H}_{b}\right)}$$

Where:

 $E_s = SO_2$ emission limit, in ng/J or lb/MMBtu heat input;

 $K_{*} = 520 \text{ ng/J} \text{ (or } 1.2 \text{ lb/MMBtu});$

 $K_b = 340 \text{ ng/J} \text{ (or } 0.80 \text{ lb/MMBtu});$

 $H_a =$ Heat input from the combustion of coal, in J (MMBtu); and

 $H_b =$ Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipaltype solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, no owner

40 CFR Ch. I (7-1-12 Edition)

or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) or 20 percent (0.20) of the potential SO₂ emission rate (80 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable. For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(c) On and after the date on which the performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of SO_2 emissions, shall cause to be discharged into the atmosphere any gases that contain SO₂ in excess of 50 percent of the potential SO₂ emission rate (50 percent reduction) and that contain SO_2 in excess of the emission limit determined according to the following formula:

$$\mathbf{E}_{s} = \frac{\left(\mathbf{K}_{c}\mathbf{H}_{c} + \mathbf{K}_{d}\mathbf{H}_{d}\right)}{\left(\mathbf{H}_{c} + \mathbf{H}_{d}\right)}$$

Where:

E_s = SO2 emission limit, in ng/J or lb/MM Btu heat input;

 $K_c = 260 \text{ ng/J} \text{ (or } 0.60 \text{ lb/MMBtu});$

 $K_d = 170 \text{ ng/J} (\text{or } 0.40 \text{ lb/MMBtu});$

H_c = Heat input from the combustion of coal, in J (MMBtu); and

 H_d = Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the

heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipaltype solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under §60.8. whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and listed in paragraphs (d)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/MMBtu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under paragraphs (d)(1), (2), (3) or (4) of this section. For facilities complying with paragraphs (d)(1), (2), or (3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipaltype solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less:

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from the exhaust gases entering the duct burner; or

(4) The affected facility burns coke oven gas alone or in combination with natural gas or very low sulfur distillate oil.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section and 60.45b(a), the SO₂ emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential SO_2 emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential SO_2 emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the SO_2 control system is not being operated because of malfunction or maintenance of the SO_2 control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in $\S60.45b(c)$ or $\S60.45b(d)$, and following the monitoring procedures as described in $\S60.47b(a)$ or $\S60.47b(b)$ to determine SO₂ emission rate or fuel oil sulfur content; or (2) maintaining fuel records as described in $\S60.49b(r)$.

(k)(1) Except as provided in paragraphs (k)(2), (k)(3), and (k)(4) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO_2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. For facilities complying with the percent reduction standard and paragraph (k)(3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in paragraph (k) of this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipaltype solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(2) Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO_2 emission rate of 140 ng/J (0.32 lb/ MMBtu) heat input or less are exempt from the SO_2 emissions limit in paragraph (k)(1) of this section.

(3) Units that are located in a noncontinental area and that combust coal, oil, or natural gas shall not discharge any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.50 lb/MMBtu) heat input if the affected facility combusts oil or natural gas.

(4) As an alternative to meeting the requirements under paragraph (k)(1) of

40 CFR Ch. I (7-1-12 Edition)

this section, modified facilities that combust coal or a mixture of coal with other fuels shall not cause to be discharged into the atmosphere any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§60.43b Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 that combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input, (i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(4) An affected facility burning coke oven gas alone or in combination with other fuels not subject to a PM standard under 60.43b and not using a postcombustion technology (except a wet scrubber) for reducing PM or SO₂ emissions is not subject to the PM limits under 60.43b(a).

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce SO_2 emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if (i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood;

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood; and

(iii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipaltype solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input;
(i) If the affected facility combusts

only municipal-type solid waste; or (ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or

less. (2) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less;

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less;

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for municipal-type solid waste, or municipal-type solid waste and other fuels; and

(iv) Construction of the affected facility commenced after June 19, 1984, but on or before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6minute average), except for one 6minute period per hour of not more than 27 percent opacity. An owner or

§60.43b

operator of an affected facility that elects to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and is subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less is exempt from the opacity standard specified in this paragraph.

(g) The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.

(h)(1) Except as provided in paragraphs (h)(2), (h)(3), (h)(4), (h)(5), and (h)(6) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input.

(2) As an alternative to meeting the requirements of paragraph (h)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is com40 CFR Ch. I (7-1-12 Edition)

pleted or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity of 73 MW (250 MMBtu/h) or less shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity greater than 73 MW (250 MMBtu/h) shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 37 ng/J (0.085 lb/MMBtu) heat input.

(5) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility not located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.30 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO₂ or PM emissions is not subject to the PM limits in (h)(1) of this section.

(6) On and after the date on which the initial performance test is completed or is required to be completed under $\S60.8$, whichever date comes first, an owner or operator of an affected facility located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.5 weight percent sulfur, coke oven gas, a

mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in $\S60.43b$ and not using a post-combustion technology (except a wet scrubber) to reduce SO₂ or PM emissions is not subject to the PM limits in (h)(1) of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 77 FR 9459, Feb. 16, 2012]

§60.44b Standard for nitrogen oxides (NO_X).

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X (expressed as NO_2) in excess of the following emission limits:

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO ₂) heat Input	
	ng/J	lb/MMBTu
(1) Natural gas and distillate oil, except (4):		
(i) Low heat release rate	43	0.10
(li) High heat release rate	86	0.20
(2) Residual oil:		
(i) Low heat release rate	130	0.30
(ii) High heat release rate	170	0.40
(3) Coal:		
(i) Mass-feed stoker (ii) Spreader stoker and fluidized bed combustion (iii) Putverized coal (iv) Lignite, except (v)	210	0.50
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70
(iv) Lignite, except (v)	260	0.60
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap		
fumace	340	0.80
(vi) Coal-derived synthetic fuels	210	0.50
(4) Duct burner used in a combined cycle system:		
(i) Natural gas and distillate oil	86	0.20
(ii) Residual oll	170	0.40

(b) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_x in excess of a limit determined by the use of the following formula:

$$\mathbf{E}_{n} = \frac{\left(\mathbf{EL}_{go}\mathbf{H}_{go}\right) + \left(\mathbf{EL}_{no}\mathbf{H}_{no}\right) + \left(\mathbf{EL}_{c}\mathbf{H}_{c}\right)}{\left(\mathbf{H}_{nc} + \mathbf{H}_{n} + \mathbf{H}_{c}\right)}$$

Where:

 $E_n = NO_x$ emission limit (expressed as NO₂), ng/J (lb/MMBtu);

- $EL_{g\alpha}$ = Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);
- H_{go} = Heat input from combustion of natural gas or distillate oil, J (MMBtu);
- EL_{ro} = Appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/MMBtu);
- H_{re} = Heat input from combustion of residual oil, J (MMBtu);
- $EL_c = Appropriate$ emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and
- H_c = Heat input from combustion of coal, J (MMBtu).

(c) Except as provided under paragraph (d) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under 60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil,

§60.44b

natural gas (or any combination of the three), and wood, or any other fuel shall cause to be discharged into the atmosphere any gases that contain NO_x in excess of the emission limit for the coal, oil, natural gas (or any combination of the three), combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section. This standard does not apply to an affected facility that is subject to and in compliance with a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, natural gas (or any combination of the three).

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas and/or distillate oil with a potential SO₂ emissions rate of 26 ng/J (0.060 lb/MMBtu) or less with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain NOx in excess of 130 ng/J (0.30 lb/ MMBtu) heat input unless the affected facility has an annual capacity factor for natural gas, distillate oil, or a mixture of these fuels of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas, distillate oil, or a mixture of these fuels.

(e) Except as provided under paragraph (1) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts only coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere any gases that contain NO_x in excess of the emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the 40 CFR Ch. I (7-1-12 Edition)

affected facility to an annual capacity factor of 10 percent (0.10) or less:

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a NO_x emission limit that shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as NO_X emissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific NO_X emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (1)(1) of this section, as appropriate, by conducting a 30-day performance test as provided in §60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (1)(1) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(1) of this section.

(2) The NO_x emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (1)(1) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by

the Administrator, a facility-specific NO_x emission limit will be established at the NO_x emission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing NO_x emissions. In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_x limit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the NO_X emission limit that applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on NO_x emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the NO_X emission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the NO_x emission limits of this section. The NO_x emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (1)(1) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials conpolychlorinated taining biphenyls (PCB's).) In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_X limit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(h) For purposes of paragraph (i) of this section, the NO_X standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less: and

(3) Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NO_X emission limits under this section.

(1) On and after the date on which the initial performance test is completed or is required to be completed under 60.8, whichever date is first, no owner or operator of an affected facility that commenced construction after July 9,

§60.44b

§60.45b

1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NOx (expressed as NO2) in excess of the following limits:

(1) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal, oil, or natural gas (or any combination of the three), alone or with any other fuels. The affected facility is not subject to this limit if it is subject to and in compliance with a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas (or any combination of the three); or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

$$E_{n} = \frac{(0.10 \times H_{g_{0}}) + (0.20 \times H_{r})}{(H_{e_{0}} + H_{r})}$$

Where:

 $E_n = NO_X$ emission limit, (lb/MMBtu);

 $H_{go} = 30$ -day heat input from combustion of natural gas or distillate oil; and

 $H_r = 30$ -day heat input from combustion of any other fuel.

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this outputbased limit must demonstrate compliance according to the procedures of \$60.48Da(i) of subpart Da of this part, and must monitor emissions according to \$60.49Da(c), (k), through (n) of subpart Da of this part.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009; 77 FR 9459, Feb. 16, 2012]

§60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2 emission standards in §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels

40 CFR Ch. I (7-1-12 Edition)

or distillate oil are allowed to exceed the limit 30 operating days per calendar year for SO_2 control system maintenance.

(b) In conducting the performance tests required under §60.8, the owner or operator shall use the methods and procedures in appendix A (including fuel certification and sampling) of this part or the methods and procedures as specified in this section, except as provided in §60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential SO₂ emission rate (% P_s) and the SO₂ emission rate (E_s) pursuant to §60.42b following the procedures listed below, except as provided under paragraph (d) and (k) of this section.

(1) The initial performance test shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the SO_2 standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal, only oil, or a mixture of coal and oil is combusted, the following procedures are used:

(i) The procedures in Method 19 of appendix A-7 of this part are used to determine the hourly SO₂ emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}) . The hourly averages used to compute the 30-day averages are obtained from the CEMS of §60.47b(a) or (b).

(ii) The percent of potential SO_2 emission rate (%P_s) emitted to the atmosphere is computed using the following formula:

$$%P_{s} = 100 \left(1 - \frac{%R_{g}}{100}\right) \left(1 - \frac{%R_{f}}{100}\right)$$

Where:

 $%P_{s} = Potential SO_{2}$ emission rate, percent:

- $R_{\rm g} = SO_2$ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and
- $R_r = SO_2$ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly SO_2 emission rate (E_{ho} °) is used in Equation 19–19 of Method 19 of appendix A of this part to compute an adjusted 30-day average emission rate (E_{ao} °). The Eho° is computed using the following formula:

$$E_{ho}^{o} = \frac{E_{ho} - E_{w}(1 - X_{k})}{X_{h}}$$

Where:

E_{ho}° = Adjusted hourly SO₂ emission rate, ng/ J (lb/MMBtu);

E_{ho} = Hourly SO₂ emission rate, ng/J (lb/ MMBtu):

- $\mathbf{E}_{\mathbf{w}} = \mathbf{SO}_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $\mathbf{E}_{\mathbf{w}}$ for each fuel lot is used for each hourly average during the time that the lot is being combusted; and
- X_k = Fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(ii) To compute the percent of potential SO₂ emission rate (%P_s), an adjusted %R_g (%R_g^o) is computed from the adjusted E_{so^o} from paragraph (b)(3)(i) of this section and an adjusted average SO₂ inlet rate (E_{si}^o) using the following formula:

$$%R_{g}^{o} = 100 \left(1.0 - \frac{E_{ao}^{o}}{E_{ai}^{o}} \right)$$

To compute E_{ai}^{o} , an adjusted hourly SO_2 inlet rate (E_{hi}^{o}) is used. The E_{hi}^{o} is computed using the following formula:

$$\mathbf{E}_{hi}^{o} = \frac{\mathbf{E}_{hi} - \mathbf{E}_{w} \left(1 - \mathbf{X}_{k}\right)}{\mathbf{X}_{k}}$$

Where:

-

 E_{hi}^{o} = Adjusted hourly SO₂ inlet rate, ng/J (lb/MMBtu); and E_{hi} = Hourly SO₂ inlet rate, ng/J (lb/MMBtu).

(4) The owner or operator of an affected facility subject to paragraph (c)(3) of this section does not have to measure parameters E_w or X_k if the owner or operator elects to assume that X_k = 1.0. Owners or operators of affected facilities who assume $X_k = 1.0$ shall:

(i) Determine %P, following the procedures in paragraph (c)(2) of this section; and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with SO₂ emission limits under §60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of §60.42b(d) does not have to measure parameters E_w or X_k in paragraph (c)(3) of this section if the owner or operator of the affected facility elects to measure SO₂ emission rates of the coal or oil following the fuel sampling and analysis procedures in Method 19 of appendix A-7 of this part.

(d) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility that combusts only very low sulfur oil, natural gas, or a mixture of these fuels, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a CEMS is used, or based on a daily average if Method 6B of appendix A of this part or fuel sampling and analysis procedures under Method 19 of appendix A of this part are used.

(e) The owner or operator of an affected facility subject to §60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under §60.8, compliance with the SO₂ emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO₂ for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under §60.8, compliance with the SO₂ emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO_2 for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for SO₂ are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall 40 CFR Ch. I (7-1-12 Edition)

use all valid SO₂ emissions data in calculating $%P_s$ and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under §60.46b are achieved. All valid emissions data, including valid SO₂ emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating $%P_s$ and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the SO₂ control systems when oil is combusted as provided under 60.42b(i), emission data are not used to calculate %P_s or E_s under 60.42b(a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under 60.42b(i).

(j) The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO_2 standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).

(k) The owner or operator of an affected facility seeking to demonstrate compliance in §§60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The PM emission standards and opacity limits under $\S60.43b$ apply at all times except during periods of startup, shutdown, or malfunction. The NO_X emission standards under $\S60.44b$ apply at all times.

(b) Compliance with the PM emission standards under 60.43b shall be determined through performance testing as described in paragraph (d) of this section, except as provided in paragraph (i) of this section.

(c) Compliance with the NO_x emission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under

paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the PM emission limits and opacity limits under §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods:

(1) Method 3A or 3B of appendix A-2 of this part is used for gas analysis when applying Method 5 of appendix A-3 of this part or Method 17 of appendix A-6 of this part.

(2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 of appendix A-6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A-3 of this part may be used in Method 17 of appendix A-6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A-6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160 ± 14 °C (320 ± 25 °F).

(5) For determination of PM emissions, the oxygen (O_2) or CO_2 sample is obtained simultaneously with each run

of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using:

(i) The O_2 or CO_2 measurements and PM measurements obtained under this section;

(ii) The dry basis F factor; and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for NO_X required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_X under §60.48(b).

(1) For the initial compliance test, NO_X from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed in §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal (except as specified under §60.46b(e)(4)) or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NO_x emission standards in §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated for each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the

§60.46b

owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NO_x standards under §60.44b on a continuous basis through the use of a 30day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, gasified coal, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_x standards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_x emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_x emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility that combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in §60.49b(e), the requirements of §60.48b(g)(1) apply and the provisions of §60.48b(g)(2) are inapplicable.

(f) To determine compliance with the emissions limits for NO_x required by §60.44b(a)(4) or §60.44b(1) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

40 CFR Ch. I (7-1-12 Edition)

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

(i) The emissions rate (E) of NO_X shall be computed using Equation 1 in this section.

$$\mathbf{E} = \mathbf{E}_{sg} + \left(\frac{\mathbf{H}_{g}}{\mathbf{H}_{b}}\right) \left(\mathbf{E}_{sg} - \mathbf{E}_{g}\right) \qquad (\text{Eq.1})$$

Where:

E = Emissions rate of NO_X from the duct burner, ng/J (lb/MMBtu) heat input;

 E_{sg} = Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part; $H_g =$ Heat input rate to the combustion tur-

bine, in J/hr (MMBtu/hr);

- H_b = Heat input rate to the duct burner, in J/ hr (MMBtu/hr); and
- E_g = Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part.

(ii) Method 7E of appendix A of this part shall be used to determine the NO_x concentrations. Method 3A or 3B of appendix A of this part shall be used to determine O₂ concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(1) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring NO_X and O_2 and meet the requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_X emissions rate at the outlet from the steam generating unit shall constitute the NO_x emissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or

§60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method or the heat input method described in sections 5 and 7.3 of the ASME Power Test Codes 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be re-quired by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in §60.44b(j) that has a heat input capacity greater than 73 MW (250 MMBtu/hr) shall:

(1) Conduct an initial performance test as required under 60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the NO_x emission standards under 60.44 using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the NO_x emission standards under 60.44 over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the PM limit in paragraphs $\S60.43b(a)(4)$ or $\S60.43b(h)(5)$ shall follow the applicable procedures in $\S60.49b(r)$.

(j) In place of PM testing with Method 5 or 5B of appendix A-3 of this part, or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall comply with the requirements specified in paragraphs (j)(1) through (j)(14) of this section.

(1) Notify the Administrator one month before starting use of the system.

(2) Notify the Administrator one month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under 60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of the CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under $\S60.8$ of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (j) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraphs (j)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (j)(7) of this section shall be expressed in ng/J or lb/ MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under color(3) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (j)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2 (or CO_2) data shall be collected concurrently (or within a 30-to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O_2 (or CO_2), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data 40 CFR Ch. I (7–1–12 Edition)

shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours per 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ ttn/chief/ert/ert_tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9460, Feb. 16, 2012]

§60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the SO₂ standards in §60.42b shall install, calibrate, maintain, and operate CEMS for measuring SO₂ concentrations and either O_2 or CO_2 concentrations and shall record the output of the systems. For units complying with the percent reduction standard, the SO₂ and either O_2 or CO_2 concentrations shall both be monitored at the inlet and outlet of the SO_2 control device. If the owner or operator has installed and certified SO₂ and O₂ or CO₂ CEMS according to the requirements of §75.20(c)(1) of this chapter and appendix A to part 75 of this chapter, and is continuing to meet the ongoing quality assurance requirements of §75.21 of this chapter and appendix B to part 75 of this chapter, those CEMS may be used to meet the requirements of this section, provided that:

(1) When relative accuracy testing is conducted, SO_2 concentration data and CO_2 (or O_2) data are collected simultaneously; and

(2) In addition to meeting the applicable SO_2 and CO_2 (or O_2) relative accuracy specifications in Figure 2 of appendix B to part 75 of this chapter, the relative accuracy (RA) standard in section 13.2 of Performance Specification 2 in appendix B to this part is met when the RA is calculated on a lb/MMBtu basis; and

(3) The reporting requirements of §60.49b are met. SO_2 and CO_2 (or O_2) data used to meet the requirements of §60.49b shall not include substitute data values derived from the missing data procedures in subpart D of part 75 of this chapter, nor shall the SO_2 data have been bias adjusted according to the procedures of part 75 of this chapter.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate, or

(2) Measuring SO₂ according to Method 6B of appendix A of this part at the inlet or outlet to the SO2 control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and CO_2 measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 or 3B of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily SO_2 emission rate, E_D , shall be determined using the procedure described in Method 6A of appendix A of this part, section 7.6.2 (Equation 6A-8) and stated in ng/J (lb/ MMBtu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/MMBtu) for 30 successive steam generating unit operating days using equation 19-20 of Method 19 of appendix A of this part.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average SO_2 emission rates measured by the CEMS required by paragraph (a) of this section and required under §60.13(h) is expressed in ng/J or lb/MMBtu heat input and is used to calculate the average emission rates under §60.42(b). Each 1-hour average SO₂ emission rate must be based on 30 or more minutes of steam generating unit operation. The hourly averages shall be calculated according to §60.13(h)(2). Hourly SO₂ emission rates are not calculated if the affected facility is operated less than 30 minutes in a given clock hour and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) Except as provided for in paragraph (e)(4) of this section, all CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Except as provided for in paragraph (e)(4) of this section, quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the SO₂ CEMS at the inlet to the SO₂ control device is 125 percent of the maximum estimated hourly potential SO₂ emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO₂ control device is 50 percent of the maximum estimated hourly potential SO₂ emissions of the fuel combusted. Alternatively, SO₂ span values determined according to section 2.1.1 in appendix A to part 75 of this chapter may be used.

(4) As an alternative to meeting the requirements of requirements of paragraphs (e)(1) and (e)(2) of this section, the owner or operator may elect to implement the following alternative data accuracy assessment procedures:

(i) For all required CO_2 and O_2 monitors and for SO_2 and NO_X monitors with span values greater than or equal to 100 ppm, the daily calibration error test and calibration adjustment procedures described in sections 2.1.1 and 2.1.3 of appendix B to part 75 of this chapter may be followed instead of the CD assessment procedures in Procedure 1, section 4.1 of appendix F to this part.

(ii) For all required CO₂ and O₂ monitors and for SO_2 and NO_X monitors with span values greater than 30 ppm, quarterly linearity checks may be performed in accordance with section 2.2.1 of appendix B to part 75 of this chapter. instead of performing the cylinder gas audits (CGAs) described in Procedure 1, section 5.1.2 of appendix F to this part. If this option is selected: The frequency of the linearity checks shall be as specified in section 2.2.1 of appendix B to part 75 of this chapter; the applicable linearity specifications in section 3.2 of appendix A to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.2.3 of appendix B to part 75 of this chapter shall be followed instead of the exces40 CFR Ch. I (7-1-12 Edition)

sive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.2.4 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the cylinder gas audits described in Procedure 1, section 5.1.2 of appendix F to this part shall be performed for SO₂ and NO_x span values less than or equal to 30 ppm; and

(iii) For SO_2 , CO_2 , and O_2 monitoring systems and for NO_X emission rate monitoring systems, RATAs may be performed in accordance with section 2.3 of appendix B to part 75 of this chapter instead of following the procedures described in Procedure 1, section 5.1.1 of appendix F to this part. If this option is selected: The frequency of each RATA shall be as specified in section 2.3.1 of appendix B to part 75 of this chapter; the applicable relative accuracy specifications shown in Figure 2 in appendix B to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.3.2 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.3.3 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the relative accuracy specification in section 13.2 of Performance Specification 2 in appendix B to this part shall be met on a lb/MMBtu basis for SO₂ (regardless of the SO_2 emission level during the RATA), and for NO_x when the average NO_X emission rate measured by the reference method during the RATA is less than 0.100 lb/MMBtu.

(f) The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under $\S60.45b(k)$ is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in $\S60.49b(r)$.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) Except as provided in paragraph (j) of this section, the owner or oper-ator of an affected facility subject to the opacity standard under §60.43b shall install, calibrate, maintain, and operate a continuous opacity monitoring systems (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard under §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), (5), or (6) of this section who elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43b by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum
§60.48b

of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.*, 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in $\S60.46d(d)(7)$.

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission **Opacity from Stationary Sources Using** Computer-Based Photographic Analvsis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02). Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO_x standard under 60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system; or

40 CFR Ch. I (7-1-12 Edition)

(2) If the owner or operator has installed a NO_x emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

(c) The CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average NO_x emission rates measured by the continuous NO_x monitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for NO_X is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NO_X span values shall be determined as follows:

Fuel	Span values for NO _X (ppm)
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas:

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NO_x span values determined according to section 2.1.2 in appendix A to part 75 of this chapter.

(3) All span values computed under paragraph (e)(2)(1) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(1) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

(f) When NO_x emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, gasified coal, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NO_X emission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in 60.41b, that is subject to the NO_X standards in 60.44b(a)(4), 60.44b(e), or 60.44b(1) is not required to install or operate a continuous emissions monitoring system to measure NO_X emissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NO_x emissions.

(j) The owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), (5), (6), or (7) of this section is not required to install or operate a COMS if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO₂ emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO₂ or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under 60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO_2 or PM emissions; or

(4) The affected facility does not use post-combustion technology (except a wet scrubber) for reducing PM, SO₂, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section: or

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A)through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in 60.58b(i)(3)of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(C) At a minimum, valid 1-hour CO emissions averages must be obtained

§60.48b

for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in $\S60.13(h)(2)$.

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(5) The affected facility uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most current requirements in section $\S60.48Da$ of this part; or

(6) The affected facility uses an ESP as the primary PM control device and uses an ESP predictive model to mon-

40 CFR Ch. I (7-1-12 Edition)

itor the performance of the ESP developed in accordance and operated according to the most current requirements in section §60.48Da of this part; or

(7) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

(k) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.46b(j). The CEMS specified in paragraph §60.46b(j) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(1) An owner or operator of an affected facility that is subject to an opacity standard under §60.43b(f) is not required to operate a COMS provided that the unit burns only gaseous fuels and/or liquid fuels (excluding residue oil) with a potential SO_2 emissions rate no greater than 26 ng/J (0.060 lb/ MMBtu), and the unit operates according to a written site-specific monitoring plan approved by the permitting authority is not required to operate a COMS. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under §60.49b(h).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9460, Feb. 16, 2012]

§60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under $\S 60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii),$ (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i),(j), (k), 60.45b(d), (g), 60.46b(h), or<math>60.48b(i);

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and

(4) Notification that an emerging technology will be used for controlling emissions of SO_2 . The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO₂, PM, and/or NO_x emission limits under §§ 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NO_X standard in §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in

conditions to be monitored in (60.48b(g)(2)) and the records to be maintained in (60.49b(g)). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. An affected facility burning coke oven gas alone or in combination with other gaseous fuels or distillate oil shall submit this plan to the Administrator for approval within 360 days of the initial startup of the affected facility or by November 30, 2009, whichever date comes later. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_x emission rates (*i.e.*, ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.*, the ratio of primary air to secondary and/ or tertiary air) and the level of excess air (*i.e.*, flue gas O_2 level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO_X emission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under \$60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under \$60.49b(g). (d) Except as provided in paragraph (d)(2) of this section, the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of this section.

(1) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(2) As an alternative to meeting the requirements of paragraph (d)(1) of this section, the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§60.46b(e)(4), 60.44b(i), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D4629 (incorporated by reference, see §60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For an affected facility subject to the opacity standard in §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in §60.48b(a) shall maintain records according to the requirements specified in paragraphs (f)(1) through (3) of this section, as applicable to the 40 CFR Ch. I (7-1-12 Edition)

visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f(2)(1) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO_x standards under 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO_x emission rates (expressed as NO_2) (ng/J or 1b/ MMBtu heat input) measured or predicted;

(3) The 30-day average NO_x emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam

generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards in $\S60.43b(f)$ or to the operating parameter monitoring requirements in $\S60.13(i)(1)$.

(2) Any affected facility that is subject to the NO_X standard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, gasified coal, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NO_X emissions on a continuous basis under §60.48b(g)(1) or

steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_X emission rate, as determined under 60.46b(e), that exceeds the applicable emission limits in 60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NO_X under \S 60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the SO_2 standards under §60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period;

(2) Each 30-day average SO_2 emission rate (ng/J or lb/MMBtu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken; For an exceedance due to maintenance of the SO_2 control system covered in paragraph 60.45b(a), the report shall identify the days on which the maintenance was performed and a description of the maintenance;

(3) Each 30-day average percent reduction in SO_2 emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating

§60.49b

§60.49b

day; justification for not obtaining sufficient data; and description of corrective action taken;

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(6) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

(7) Identification of times when hourly averages have been obtained based on manual sampling methods;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3;

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part; and

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(1) For each affected facility subject to the compliance and performance testing requirements of 60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average SO_2 emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining suffi40 CFR Ch. I (7-1-12 Edition)

cient data; and description of corrective action taken;

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(5) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

(6) Identification of times when hourly averages have been obtained based on manual sampling methods;

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(8) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Procedure 1 of appendix F 1 of this part. If the owner or operator elects to implement the alternative data assessment procedures described in §§60.47b(e)(4)(i) through (e)(4)(iii), each data assessment report shall include a summary of the results of all of the RATAs, linearity checks, CGAs, and calibration error or drift assessments required by §§60.47b(e)(4)(i) through (e)(4)(ii).

(m) For each affected facility subject to the SO₂ standards in §60.42(b) for which the minimum amount of data required in §60.47b(c) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates;

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19 of appendix A of this part, section 7;

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in

Method 19 of appendix A of this part, section 7; and

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19 of appendix A of this part, section 7.

(n) If a percent removal efficiency by fuel pretreatment (*i.e.*, $\[mathcal{R}_r\]$) is used to determine the overall percent reduction (*i.e.*, $\[mathcal{R}_o\]$) under §60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (*i.e.*, $\Re R_f$) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit; and

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 of appendix A of this part and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load. (q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months; (2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in 60.44b(j), the results of any NO_X emission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO_X emission test.

(r) The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in $\S60.42b$ or $\S60.43b$ shall either:

(1) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

(2) The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

§60.49b

§60.49b

(i) The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;

(ii) The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;

(iii) The ratio of different fuels in the mixture; and

(iv) The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

(s) Facility specific NO_X standard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) Definitions.

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) Standard for nitrogen oxides. (i) When fossil fuel alone is combusted, the NO_x emission limit for fossil fuel in §60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the NO_X emission limit is 289 ng/J (0.67 lb/MMBtu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) Emission monitoring. (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis. 40 CFR Ch. I (7-1-12 Edition)

(ii) The NO_x emission limit shall be determined by the compliance and performance test methods and procedures for NO_x in 60.46b(i).

(iii) The monitoring of the NO_X emission limit shall be performed in accordance with §60.48b.

(4) Reporting and recordkeeping requirements. (1) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (1) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) Facility-specific NO_x standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) Definitions.

Air ratio control damper is defined as the part of the low NO_X burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) Standard for nitrogen oxides. (i) When fossil fuel alone is combusted, the NO_x emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct waste are simultaneously combusted, the NO_X emission limit is 473 ng/J (1.1 lb/MMBtu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) Emission monitoring for nitrogen oxides. (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position

indicator setting shall be recorded during each 8-hour operating shift.

(ii) The NO_x emission limit shall be determined by the compliance and performance test methods and procedures for NO_x in §60.46b.

(iii) The monitoring of the NO_x emission limit shall be performed in accordance with §60.48b.

(4) Reporting and recordkeeping requirements. (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(u) Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia. (1) This paragraph (u) applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site") and only to the natural gasfired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of §§ 60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low NO_X technology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NO_x emissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a performance test to quantify criteria pollutant emissions.

(2) [Reserved]

§60.49b

(v) The owner or operator of an affected facility may submit electronic quarterly reports for SO2 and/or NOx and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

(x) Facility-specific NO_x standard for Weyerhaeuser Company's No. 2 Power Boiler located in New Bern, North Carolina:

(1) Standard for nitrogen oxides. (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in 60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct waste are simultaneously combusted, the NO_x emission limit is 215 ng/J (0.5 lb/MMBtu).

(2) Emission monitoring for nitrogen oxides. (i) The NO_X emissions shall be determined by the compliance and performance test methods and procedures for NO_X in & 60.46b.

(ii) The monitoring of the NO_X emissions shall be performed in accordance with §60.48b.

(3) Reporting and recordkeeping requirements. (i) The owner or operator of the No. 2 Power Boiler shall submit a report on any excursions from the limits required by paragraph (x)(2) of this section to the Administrator with the quarterly report required by §60.49b(i). (ii) The owner or operator of the No. 2 Power Boiler shall keep records of the monitoring required by paragraph (x)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the No. 2 Power Boiler shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(y) Facility-specific NO_X standard for INEOS USA's AOGI located in Lima, Ohio:

(1) Standard for NO_X . (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct/waste are simultaneously combusted, the NO_x emission limit is 645 ng/J (1.5 lb/MMBtu).

(2) Emission monitoring for NO_x . (i) The NO_x emissions shall be determined by the compliance and performance test methods and procedures for NO_x in §60.46b.

(ii) The monitoring of the NO_X emissions shall be performed in accordance with §60.48b.

(3) Reporting and recordkeeping requirements. (i) The owner or operator of the AOGI shall submit a report on any excursions from the limits required by paragraph (y)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the AOGI shall keep records of the monitoring required by paragraph (y)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the AOGI shall perform all the applicable reporting and recordkeeping requirements of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5089, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

SOURCE: 72 FR 32759, June 13, 2007, unless otherwise noted.

40 CFR Ch. I (7-1-12 Edition)

§60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Affected facilities (i.e. heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

APPENDIX B NSPS Subpart BB

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(3) An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.

[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6673, Feb. 14, 1989; 64 FR 10111, Mar. 2, 1999; 65 FR 61758, Oct. 17, 2000; 70 FR 8533, Feb. 22, 2005]

Subpart BB—Standards of Performance for Kraft Pulp Mills

§60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facllities in kraft pulp mills: Digester system, brown stock washer system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

(b) Except as noted in §60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.

[51 FR 18544, May 20, 1986]

§60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in subpart A.

(a) Kraft pulp mill means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill. (b) Neutral sulfite semichemical pulping operation means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(c) Total reduced sulfur (TRS) means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Method 16.

(d) Digester system means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), blow tank(s), chip steamer(s), and condenser(s).

(e) Brown stock washer system means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digester system. Diffusion washers are excluded from this definition.

(f) Multiple-effect evaporator system means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).

(g) Black liquor oxidation system means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).

(h) *Recovery furnace* means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

(i) Straight kraft recovery furnace means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.

(j) Cross recovery furnace means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical process and has a green

§60.282

liquor sulfidity of more than 28 percent.

(k) Black liquor solids means the dry weight of the solids which enter the recovery furnace in the black liquor.

(1) Green liquor sulfidity means the sulfidity of the liquor which leaves the smelt dissolving tank.

(m) Smelt dissolving tank means a vessel used for dissolving the smelt collected from the recovery furnace.

(n) *Lime kiln* means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

(o) Condensate stripper system means a column, and associated condensers, used to strip, with air or steam, TRS compounds from condensate streams from various processes within a kraft pulp mill.

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

§60.282 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by $\S60.8$ is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any recovery furnace any gases which:

(i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen.

(ii) Exhibit 35 percent opacity or greater.

(2) From any smelt dissolving tank any gases which contain particulate matter in excess of 0.1 g/kg black liquor solids (dry weight)[0.2 lb/ton black liquor solids (dry weight)].

(3) From any lime kiln any gases which contain particulate matter in excess of:

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

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

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

40 CFR Ch. I (7-1-12 Edition)

§60.283 Standard for total reduced sulfur (TRS).

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

(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:

(i) The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of this section; or

(ii) The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of this section; or

(iii) The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 second; or

(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.

(v) The gases from the digester system, brown stock washer system, or condensate stripper system are controlled by a means other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, uncorrected for oxygen content.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg air dried pulp (ADP) (0.01 lb/ ton ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS

in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg black liquor solids as H_2S (0.033 lb/ton black liquor solids as H_2S).

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

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

§60.284 Monitoring of emissions and operations.

(a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmosphere from any recovery furnace. The span of this system shall be set at 70 percent opacity.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of §60.283(a)(1) (iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

(ii) At 25 percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices: (1) For any incinerator, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system where the provisions of \S 60.283(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

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

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

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

(c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of $\S 60.283(a)(1)(ii)$ or (iv) apply, perform the following:

(1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12hour averages shall correspond to the

§60.284

§ 60.285

12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(3) Using the following equation, correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentrations from a recovery furnace shall be corrected to 8 volume percent oxygen instead of 10 percent, and all 12-hour average TRS concentrations from a facility to which the provisions of \S 60.283(a)(1)(v) apply shall not be corrected for oxygen content:

 $C_{\text{corr}} = C_{\text{meas}} \times (21 - X/21 - Y)$ where:

 C_{corr} =the concentration corrected for oxygen. C_{meas} =the concentration uncorrected for oxygen.

- X=the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).
- Y=the measured 12-hour average volumetric oxygen concentration.

(4) Record once per shift measurements obtained from the continuous monitoring devices installed under paragraph (b)(2) of this section.

(d) For the purpose of reports required under §60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows:

(1) For emissions from any recovery furnace periods of excess emissions are:

(i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces.

(ii) All 6-minute average opacities that exceed 35 percent.

(2) For emissions from any lime kiln, periods of excess emissions are all 12hour average TRS concentration above 8 ppm by volume.

(3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system periods of excess emissions are:

(i) All 12-hour average TRS concentrations above 5 ppm by volume un40 CFR Ch. I (7-1-12 Edition)

less the provisions of (0.283(a)(1)) (i), (ii), or (iv) apply; or

(ii) All periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 650 °C (1200 °F), where the provisions of $\S60.283(a)(1)(iii)$ apply.

(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of $\S60.11(d)$ provided that:

(1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from recovery furnaces.

(ii) Six percent for average opacities from recovery furnaces.

(2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

(f) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems required under this section. All continuous monitoring systems shall be operated in accordance with the applicable procedures under Performance Specifications 1, 3, and 5 of appendix B of this part.

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

§60.285 Test methods and procedures.

(a) In conducting the performance tests required in $\S60.8$, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures in this section, except as provided in $\S60.8$ (b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in 60.282(a) (1) and (3) as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to 60.284(c)(3).

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

(3) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c) The owner or operator shall determine compliance with the particular matter standard in 60.282(a)(2) as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

E=c, Q, /BLS

where:

E=emission rate of particulate matter, g/kg (lb/ton) of BLS.

c_s = Concentration of particulate matter, g/ dscm (lb/dscf).

 Q_{zd} =volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

BLS=black liquor solids (dry weight) feed rate, kg/hr (ton/hr).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used instead of acetone in the sample recovery.

(3) Process data shall be used to determine the black liquor solids (BLS) feed rate on a dry weight basis.

(d) The owner or operator shall determine compliance with the TRS standards in 60.283, except 60.283(a)(1)(v) and (4), as follows:

(1) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in 60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours.

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples.

(3) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference—see $\S60.17$) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made 3 times daily from the green liquor, and the daily average values shall be converted to sodium oxide (Na₂0) and substituted into the following equation to determine the green liquor sulfidity:

$$GLS = 100 C_{Na_2S} / (C_{Na_2S} C_{NaOH} C_{Na_2CO_3})$$

Where:

GLS=green liquor sulfidity, percent. C_{Na2S} =concentration of Na₂S as Na₂O, mg/

liter (gr/gal). C_{NaOH} =concentration of NaOH as Na₂O, mg/

liter (gr/gal). C_{Na2CO3}=concentration of Na₂CO₃ as Na₂O, mg/ liter (gr/gal).

(e) The owner or operator shall determine compliance with the TRS standards in $\S60.283(a)(1)(vi)$ and (4) as follows:

(1) The emission rate (E) of TRS shall be computed for each run using the following equation:

E=CTRS F Qsd/P

where:

E=emission rate of TRS, g/kg (lb/ton) of BLS or ADP.

C_{TRS}=average combined concentration of TRS, ppm.

 $F = \text{conversion factor, 0.001417 g } H_2S/m^3-ppm$ (8.846 × 10⁻⁸ lb H_2S/ft^3-ppm).

Q_{id}=volumetric flow rate of stack gas, dscm/ hr (dscf/hr).

P=black liquor solids feed or pulp production rate, kg/hr (ton/hr).

(2) Method 16 shall be used to determine the TRS concentration (C_{TRS}).

(3) Method 2 shall be used to determine the volumetric flow rate (Q_{sd}) of the effluent gas.

(4) Process data shall be used to determine the black liquor feed rate or the pulp production rate (P).

§60.285

§ 60.290

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 5, Method 17 may be used if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 204 °C (400 °F).

(2) In place of Method 16, Method 16A or 16B may be used.

[54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990; 65 FR 61759, Oct. 17, 2000]

Subpart CC—Standards of Performance for Glass Manufacturing Plants

§60.290 Applicability and designation of affected facility.

(a) Each glass melting furnace is an affected facility to which the provisions of this subpart apply.

(b) Any facility under paragraph (a) of this section that commences construction or modification after June 15, 1979, is subject to the requirements of this subpart.

(c) This subpart does not apply to hand glass melting furnaces, glass melting furnaces designed to produce less than 4.55 Mg (5 tons) of glass per day and all-electric melters.

[45 FR 66751, Oct. 7, 1980, as amended at 65 FR 61759, Oct. 17, 2000]

§60.291 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part, unless otherwise required by the context.

All-electric melter means a glass melting furnace in which all the heat required for melting is provided by electric current from electrodes submerged in the molten glass, although some fossil fuel may be charged to the furnace as raw material only.

Borosilicate recipe means glass product composition of the following approximate ranges of weight proportions: 60 to 80 percent silicon dioxide, 4 to 10 percent total R_2O (e.g., Na_2O and K_2O), 5 to 35 percent boric oxides, and 0 to 13 percent other oxides.

40 CFR Ch. I (7-1-12 Edition)

Container glass means glass made of soda-lime recipe, clear or colored, which is pressed and/or blown into bottles, jars, ampoules, and other products listed in Standard Industrial Classification 3221 (SIC 3221).

Experimental furnace means a glass melting furnace with the sole purpose of operating to evaluate glass melting processes, technologies, or glass products. An experimental furnace does not produce glass that is sold (except for further research and development purposes) or that is used as a raw material for nonexperimental furnaces.

Flat glass means glass made of sodalime recipe and produced into continuous flat sheets and other products listed in SIC 3211.

Flow channels means appendages used for conditioning and distributing molten glass to forming apparatuses and are a permanently separate source of emissions such that no mixing of emissions occurs with emissions from the melter cooling system prior to their being vented to the atmosphere.

Glass melting furnace means a unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass. The unit includes foundations, superstructure and retaining walls, raw material charger systems, heat exchangers, melter cooling system, exhaust system, refractory brick work, fuel supply and electrical boosting equipment, integral control systems and instrumentation, and appendages for conditioning and distributing molten glass to forming apparatuses. The forming apparatuses, including the float bath used in flat glass manufacturing and flow channels in wool fiberglass and textile fiberglass manufacturing, are not considered part of the glass melting furnace.

Glass produced means the weight of the glass pulled from the glass melting furnace.

Hand glass melting furnace means a glass melting furnace where the molten glass is removed from the furnace by a glassworker using a blowpipe or a pontil.

Lead recipe means glass product composition of the following ranges of

APPENDIX C NSPS Subpart RR

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by the Administrator in accordance with §60.8(b).

(d) The owner or operator of any affected facility shall determine the density of raw inks, related coatings, and VOC solvents by:

(1) Making a total of three determinations for each liquid sample at specified temperatures using the procedure outlined in ASTM D1475-60, 80, or 90, which is incorporated by reference. It is available from the American Society of Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go http://www.archives.gov/ to: federal register/

code_of_federal_regulations/ ibr_locations.html. This incorporation by reference was approved by the Director of the Federal Register on November 8, 1982. This material is incorporated as it exists on the date of approval and a notice of any change in these materials will be published in the FEDERAL REGISTER. The temperature and density is recorded as the arithmetic average of the three determinations; or

(2) Using literature values, at specified temperatures, acceptable to the Administrator.

(e) If compliance is determined according to §60.433 (e), (f), or (g), the existing as well as affected facilities are subject to the requirements of paragraphs (a) through (d) of this section.

[47 FR 50649, Nov. 8, 1982, as amended at 65 FR 61761, Oct. 17, 2000; 69 FR 18803, Apr. 9, 20041

Subpart RR—Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations

SOURCE: 48 FR 48375, Oct. 18, 1983, unless otherwise noted.

§60.440 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each coating line used in the manufacture of

pressure sensitive tape and label materials.

(b) Any affected facility which inputs to the coating process 45 Mg (50 tons) of VOC or less per 12 month period is not subject to the emission limits of §60.442(a), however, the affected facility is subject to the requirements of all other applicable sections of this subpart. If the amount of VOC input exceeds 45 Mg (50 tons) per 12 month period, the coating line will become subject to §60.442(a) and all other sections of this subpart.

(c) This subpart applies to any affected facility which begins construction, modification, or reconstruction after December 30, 1980.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 20001

§60.441 Definitions and symbols.

(a) Except as otherwise required by the context, terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Coating applicator means an apparatus used to apply a surface coating to a continuous web.

Coating line means any number or combination of adhesive, release, or precoat coating applicators, flashoff areas, and ovens which coat a continuous web, located between a web unwind station and a web rewind station, to produce pressure sensitive tape and label materials.

Coating solids applied means the solids content of the coated adhesive, release. or precoat as measured by Method 24.

Flashoff area means the portion of a coating line after the coating applicator and usually before the oven entrance.

Fugitive volatile organic compounds means any volatile organic compounds which are emitted from the coating applicator and flashoff areas and are not emitted in the oven.

Hood or enclosure means any device used to capture fugitive volatile organic compounds.

Oven means a chamber which uses heat or irradiation to bake, cure, polymerize, or dry a surface coating.

Precoat means a coating operation in which a coating other than an adhesive or release is applied to a surface during

§60.442

the production of a pressure sensitive tape or label product.

Solvent applied in the coating means all organic solvent contained in the adhesive, release, and precoat formulations that is metered into the coating applicator from the formulation area.

Total enclosure means a structure or building around the coating applicator and flashoff area or the entire coating line for the purpose of confining and totally capturing fugitive VOC emissions.

VOC means volatile organic compound.

(b) All symbols used in this subpart not defined below are given meaning in the Act or in subpart A of this part.

a=the gas stream vents exiting the emission control device.

- b=the gas stream vents entering the emission control device.
- G_{sj} =the concentration of VOC (carbon equivalent) in each gas stream (j) exiting the emission control device, in parts per million by volume.
- C_{bi}=the concentration of VOC (carbon equivalent) in each gas stream (1) entering the emission control device, in parts per million by volume.
- C_{R} =the concentration of VOC (carbon equivalent) in each gas stream (k) emitted directly to the atmosphere, in parts per million by volume.
- G=the calculated weighted average mass (kg) of VOC per mass (kg) of coating solids applied each calendar month.
- M_{ci} =the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records.
- M_e=the total mass (kg) of solvent recovered for a calendar month.
- Q_{aj} =the volumetric flow rate of each effluent gas stream () exiting the emission control device, in dry standard cubic meters per hour.
- \mathbf{Q}_{bi} =the volumetric flow rate of each effluent gas stream (1) entering the emission control device, in dry standard cubic meters per hour.
- Q_{0x} =the volumetric flow rate of each effluent gas stream (k) emitted to the atmosphere, in dry standard cubic meters per hour.
- R=the overall VOC emission reduction achieved for a calendar month (in percent). R_q =the required overall VOC emission reduc-
- tion (in percent). W_{oi} =the weight fraction of organics applied of each coating (i) applied during a calendar month as determined from Method 24 or coating manufacturer's formulation data.
- W_{si} =the weight fraction of solids applied of each coating (i) applied during a calendar

40 CFR Ch. I (7-1-12 Edition)

month as determined from Method 24 or coating manufacturer's formulation data.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

§60.442 Standard for volatile organic compounds.

(a) On and after the date on which the performance test required by §60.8 has been completed each owner or operator subject to this subpart shall:

(1) Cause the discharge into the atmosphere from an affected facility not more than 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month; or

(2) Demonstrate for each affected facility;

(i) A 90 percent overall VOC emission reduction as calculated over a calendar month; or

(ii) The percent overall VOC emission reduction specified in 60.443(b) as calculated over a calendar month.

§60.443 Compliance provisions.

(a) To determine compliance with §60.442 the owner or operator of the affected facility shall calculate a weighted average of the mass of solvent used per mass of coating solids applied for a one calendar month period according to the following procedures:

(1) Determine the weight fraction of organics and the weight fraction of solids of each coating applied by using Reference Method 24 or by the coating manufacturer's formulation data.

(2) Compute the weighted average by the following equation:

$$G = \frac{\sum_{i=1}^{n} W_{oi} M_{ci}}{\sum_{i=1}^{n} W_{si} M_{ci}}$$

(3) For each affected facility where the value of G is less than or equal to 0.20 kg VOC per kg of coating solids applied, the affected facility is in compliance with §60.442(a)(1).

(b) To determine compliance with §60.442(a)(2), the owner or operator shall calculate the required overall VOC emission reduction according to the following equation:

$$R_q = \frac{G - 0.20}{G} \times 100$$

If R_q is less than or equal to 90 percent, then the required overall VOC emission reduction is R_q . If R_q is greater than 90 percent, then the required overall VOC emission reduction is 90 percent.

(c) Where compliance with the emission limits specified in $\S60.442(a)(2)$ is achieved through the use of a solvent recovery system, the owner or operator shall determine the overall VOC emission reduction for a one calendar month period by the following equation:

$$R = \sum_{i=1}^{n} \frac{M_r}{W_{oi}M_{ci}} \times 100$$

If the R value is equal to or greater than the R_q value specified in paragraph (b) of this section, then compliance with 60.442(a)(2) is demonstrated.

(d) Where compliance with the emission limit specified in §60.442(a)(2) is achieved through the use of a solvent destruction device, the owner or operator shall determine calendar monthly compliance by comparing the monthly required overall VOC emission reduction specified in paragraph (b) of this section to the overall VOC emission reduction demonstrated in the most recent performance test which complied with §60.442(a)(2). If the monthly required overall VOC emission reduction is less than or equal to the overall VOC reduction of the most recent performance test, the affected facility is in compliance with $\S60.442(a)(2)$.

Where with (e) compliance §60.442(a)(2) is achieved through the use of a solvent destruction device, the owner or operator shall continuously record the destruction device combustion temperature during coating operations for thermal incineration destruction devices or the gas temperature upstream and downstream of the incinerator catalyst bed during coating operations for catalytic incineration destruction devices. For thermal incineration destruction devices the owner or operator shall record all 3-hour periods (during actual coating operations) during which the average temperature of the device is more than 28 °C (50 °F)

§60.443

below the average temperature of the device during the most recent performance test complying with $\S60.442(a)(2)$. For catalytic incineration destruction devices, the owner or operator shall record all 3-hour periods (during actual coating operations) during which the average temperature of the device immediately before the catalyst bed is more than 28 °C (50 °F) below the average temperature of the device during the most recent performance test complying with §60.442(a)(2), and all 3-hour periods (during actual coating operations) during which the average temperature difference across the catalyst bed is less than 80 percent of the average temperature difference of the device during the most recent performance test complying with 60.442(a)(2).

(f) After the initial performance test required for all affected facilities under $\S60.8$, compliance with the VOC emission limitation and percentage reduction requirements under $\S60.442$ is based on the average emission reduction for one calendar month. A separate compliance test is completed at the end of each calendar month after the initial performance test, and a new calendar month's average VOC emission reduction is calculated to show compliance with the standard.

(g) If a common emission control device is used to recover or destroy solvent from more than one affected facility, the performance of that control device is assumed to be equal for each of the affected facilities. Compliance with $\S 60.442(a)(2)$ is determined by the methods specified in paragraphs (c) and (d) of this section and is performed simultaneously on all affected facilities.

(h) If a common emission control device is used to recover solvent from an existing facility (or facilities) as well as from an affected facility (or facilities), the overall VOC emission reduction for the affected facility (or facilities), for the purpose of compliance, shall be determined by the following procedures:

(1) The owner or operator of the existing facility (or facilities) shall determine the mass of solvent recovered for a calendar month period from the existing facility (or facilities) prior to the connection of the affected facility (or facilities) to the emission control device.

(2) The affected facility (or facilities) shall then be connected to the emission control device.

(3) The owner or operator shall determine the total mass of solvent recovered from both the existing and affected facilities over a calendar month period. The mass of solvent determined in paragraph (h)(1) of this section from the existing facility shall be subtracted from the total mass of recovered solvent to obtain the mass of solvent recovered from the affected facility (or facilities). The overall VOC emission reduction of the affected facility (or facilities) can then be determined as specified in paragraph (c) of this section.

(i) If a common emission control device(s) is used to destruct solvent from an existing facility (or facilities) as well as from an affected facility (or facilities), the overall VOC emission reduction for the affected facility (or facilities), for the purpose of compliance, shall be determined by the following procedures:

(1) The owner or operator shall operate the emission control device with both the existing and affected facilities connected.

(2) The concentration of VOC (in parts per million by volume) after the common emission control device shall be determined as specified in $\S60.444(c)$. This concentration is used in the calculation of compliance for both the existing and affected facilities.

(3) The volumetric flow out of the common control device attributable to the affected facility (or facilities) shall be calculated by first determining the ratio of the volumetric flow entering the common control device attributable to the affected facility (facilities) to the total volumetric flow entering the common control device from both existing and affected facilities. The multiplication of this ratio by the total volumetric flow out of the common control device yields the flow attributable to the affected facility (facilities). Compliance is determined by the use of the equation specified in §60.444(c).

(j) Startups and shutdowns are normal operation for this source category. 40 CFR Ch. I (7-1-12 Edition)

Emissions from these operations are to be included when determining if the standard specified at $\S60.442(a)(2)$ is being attained.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

§ 60.444 Performance test procedures.

(a) The performance test for affected facilities complying with 60.442 without the use of add-on controls shall be identical to the procedures specified in 60.443(a).

(b) The performance test for affected facilities controlled by a solvent recovery device shall be conducted as follows:

(1) The performance test shall be a one calendar month test and not the average of three runs as specified in $\S60.8(f)$.

(2) The weighted average mass of VOC per mass of coating solids applied for a one calendar month period shall be determined as specified in 60.443(a) (1) and (2).

(3) Calculate the required percent overall VOC emission reduction as specified in § 60.443(b).

(4) Inventory VOC usage and VOC recovery for a one calendar month period.

(5) Determine the percent overall VOC emission reduction as specified in §60.443(c).

(c) The performance test for affected facilities controlled by a solvent destruction device shall be conducted as follows:

(1) The performance of the solvent destruction device shall be determined by averaging the results of three test runs as specified in $\S60.8(f)$.

(2) Determine for each affected facility prior to each test run the weighted average mass of VOC per mass of coating solids applied being used at the facility. The weighted average shall be determined as specified in §60.443(a). In this application the quantities of W_{ci} , W_{si} , and M_{ci} shall be determined for the time period of each test run and not a calendar month as specified in §60.441.

(3) Calculate the required percent overall VOC emission reduction as specified in \S 60.443(b).

(4) Determine the percent overall VOC emission reduction of the solvent

destruction device by the following equation and procedures:

$$R = \frac{\sum_{i=1}^{n} Q_{in}C_{ii} - \sum_{i=1}^{m} Q_{in}C_{ii}}{\sum_{i=1}^{n} Q_{in}C_{ii} + \sum_{i=1}^{p} Q_{in}C_{ii}} \times 100$$

(i) The owner or operator of the affected facility shall construct the overall VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in §60.446(b).

(ii) The owner or operator of an affected facility shall construct a temporary total enclosure around the coating line applicator and flashoff area during the performance test for the purpose of capturing fugitive VOC emissions. If a permanent total enclosure exists in the affected facility prior to the performance test and the Administrator is satisfied that the enclosure is totally capturing fugitive VOC emissions, then no additional total enclosure will be required for the performance test.

(iii) For each affected facility where the value of R is greater than or equal to the value of R_q calculated in §60.443(b), compliance with §60.442(a)(2) is demonstrated.

§60.445 Monitoring of operations and recordkeeping.

(a) The owner or operator of an affected facility subject to this subpart shall maintain a calendar month record of all coatings used and the results of the reference test method specified in $\S60.446(a)$ or the manufacturer's formulation data used for determining the VOC content of those coatings.

(b) The owner or operator of an affected facility controlled by a solvent recovery device shall maintain a calendar month record of the amount of solvent applied in the coating at each affected facility.

(c) The owner or operator of an affected facility controlled by a solvent recovery device shall install, calibrate, maintain, and operate a monitoring device for indicating the cumulative amount of solvent recovered by the device over a calendar month period. The monitoring device shall be accurate within ±2.0 percent. The owner or operator shall maintain a calendar month record of the amount of solvent recovered by the device.

(d) The owner or operator of an affected facility operating at the conditions specified in 60.440(b) shall maintain a 12 month record of the amount of solvent applied in the coating at the facility.

(e) The owner or operator of an affected facility controlled by a thermal incineration solvent destruction device shall install, calibrate, maintain, and operate a monitoring device which continuously indicates and records the temperature of the solvent destruction device's exhaust gases. The monitoring device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or ± 2.5 °C.

(f) The owner or operator of an affected facility controlled by a catalytic incineration solvent destruction device shall install, calibrate, maintain, and operate a monitoring device which continuously indicates and records the gas temperature both upstream and downstream of the catalyst bed.

(g) The owner or operator of an affected facility controlled by a solvent destruction device which uses a hood or enclosure to capture fugitive VOC emissions shall install, calibrate, maintain, and operate a monitoring device which continuously indicates that the hood or enclosure is operating. No continuous monitor shall be required if the owner or operator can demonstrate that the hood or enclosure system is interlocked with the affected facility's oven recirculation air system.

(h) Records of the measurements required in \S 60.443 and 60.445 must be retained for at least two years following the date of the measurements.

§60.446 Test methods and procedures.

(a) The VOC content per unit of coating solids applied and compliance with $\S60.422(a)(1)$ shall be determined by either Method 24 and the equations specified in $\S60.443$ or by manufacturers' formulation data. In the event of any inconsistency between a Method 24 test and manufacturers' formulation data, the Method 24 test will govern. The Administrator may require an owner or

40 CFR Ch. I (7-1-12 Edition)

§60.447

operator to perform Method 24 tests during such months as he deems appropriate. For Method 24, the coating sample must be a one liter sample taken into a one liter container at a point where the sample will be representative of the coating applied to the web substrate.

(b) Method 25 shall be used to determine the VOC concentration, in parts per million by volume, of each effluent gas stream entering and exiting the solvent destruction device or its equivalent, and each effluent gas stream emitted directly to the atmosphere. Methods 1, 2, 3, and 4 shall be used to determine the sampling location, volumetric flowrate, molecular weight, and moisture of all sampled gas streams. For Method 25, the sampling time for each of three runs must be at least 1 hour. The minimum sampling volume must be 0.003 dscm except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator.

(c) If the owner or operator can demonstrate to the Administrator's satisfaction that testing of representative stacks yields results comparable to those that would be obtained by testing all stacks, the Administrator will approve testing of representative stacks on a case-by-case basis.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

§60.447 Reporting requirements.

(a) For all affected facilities subject to compliance with 60.442, the performance test data and results from the performance test shall be submitted to the Administrator as specified in 60.8(a) of the General Provisions (40 CFR part 60, subpart A).

(b) Following the initial performance test, the owner or operator of each affected facility shall submit quarterly reports to the Administrator of exceedances of the VOC emission limits specified in 60.442. If no such exceedances occur during a particular quarter, a report stating this shall be submitted to the Administrator semiannually.

(c) The owner or operator of each affected facility shall also submit reports at the frequency specified in $\S60.7(c)$ when the incinerator temperature drops as defined under §60.443(e). If no such periods occur, the owner or operator shall state this in the report.

(d) The requirements of this subsection remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with this subsection, provided that they comply with the requirements established by the State.

[48 FR 48375, Oct. 18, 1983, as amended at 55 FR 51383, Dec. 13, 1990]

Subpart SS—Standards of Performance for Industrial Surface Coating: Large Appliances

SOURCE: 47 FR 47785, Oct. 27, 1982, unless otherwise noted.

§60.450 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to each surface coating operation in a large appliance surface coating line.

(b) The provisions of this subpart apply to each affected facility identified in paragraph (a) of this section that commences construction, modification, or reconstruction after December 24, 1980.

§60.451 Definitions.

(a) All terms used in this subpart not defined below are given the meaning in the Act or in subpart A of this part.

Applied coating solids means the coating solids that adhere to the surface of the large appliance part being coated.

Coating application station means that portion of the large appliance surface coating operation where a prime coat or a top coat is applied to large appliance parts or products (e.g., dip tank, spray booth, or flow coating unit).

Curing oven means a device that uses heat to dry or cure the coating(s) applied to large appliance parts or products.

APPENDIX D MACT S

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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 $\S63.2$ 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 sourceprovisions 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)(i)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

(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)(i) 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.

§63.440

§63.441

(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 $\S63.454(c)$.

(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 $\S63.6(b)$ 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. 40 CFR Ch. I (7–1–12 Edition)

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 thermomechanical.

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. Ex40 CFR Ch. I (7–1–12 Edition)

amples 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 rectifilers, 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 ((°deg;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)(ii), 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

§63.443

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 closedvent 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 $\S63.455$ shall not be a violation of $\S63.443$ (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:

40 CFR Ch. I (7-1-12 Edition)

(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 $\S63.450$. 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 sodiumbased 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 total HAP or methanol per of 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 bleach-ing 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;

§ 63.446

(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 40 CFR Ch. I (7-1-12 Edition)

(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 $\S63.450$ and routed to a control device that meets the requirements in $\S63.443(d)$; 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 $\S63.443(a)$ meeting the requirements specified in $\S63.443(c)$ 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 $\S63.443(a)(1)(i)$ 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 $\S63.443(a)(1)(ii)$ 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.

§§ 63.448-63.449

(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 $\S63.457$.

(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

40 CFR Ch. I (7-1-12 Edition)

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 $\S63.440(d)$ 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 $\S63.457(e)$. Each enclosure or hood opening closed during the initial performance test specified in $\S63.457(a)$ 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 closedvent system used to comply with \S 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 closedvent 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 \S 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 \S 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 $\S63.443(d)(1)$ through (d)(3). Owners and operators complying with the HAP concentration requirements in $\S63.443(d)(2)$ 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 $\S63.445(c)$ or the sulfite pulping system requirements of $\S63.444(c)$.

(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 $\S63.445(c)(2)$.

(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 $\S63.440(d)(3)$.

(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 \S 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):

The process wastewater feed rate;
 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

§63.453

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 BOD₅ 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 $\S63.457(1)$, 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 $\S63.457(n)$ until after the results of the soluble BOD₅ test required in paragraph (j)(1)(1)(A) of this section are obtained. The storage requirement is needed since the soluble BOD₅ test re-

40 CFR Ch. I (7-1-12 Edition)

quires 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 $\S63.457(1)$ within 45 days after the beginning of each quarter and meet the applicable emission limit in $\S63.446(e)(2)$.

(i) The performance test conducted in the first quarter (annually) shall be performed for total HAP as specified in $\S63.457(g)$ and meet the percent reduction or mass removal emission limit specified in $\S63.446(e)(2)$.

(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(1)(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 $\S63.450(a)$ 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 \S 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 \S 63.450(c) measured initially and annually by the procedures in \S 63.457(d).

(4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in $\S63.457(e)$.

(5) The value or closure mechanism specified in 63.450(d)(2) shall be inspected at least once every 30 days to ensure that the value 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.

(1) Each pulping process condensate closed collection system used to comply with 63.446(d) shall comply with the requirements specified in paragraphs (1)(1) through (1)(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 $\S63.964(a)(2)$ 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

§63.453

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)(i) 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.

40 CFR Ch. I (7-1-12 Edition)

(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 $\S63.446(e)(2)$, 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(1) 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 fbio (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 $\S63.454(e)$ and reporting in $\S63.455(f)$.

(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 sitespecific 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 $\S63.450(d)(1)$ 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 $\S63.9(b)(2)$ 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 $\S63.440(d)(1)$ or a bleaching system specified in $\S63.440(d)(3)(ii)$ shall submit, with the initial notification report specified under $\S63.9(b)(2)$ 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 $\S63.9(b)(2)$ 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;

40 CFR Ch. I (7-1-12 Edition)

(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 $\S63.440(d)(3)(ii)(B)$ shall certify in the report specified under $\S63.10(e)(3)$ 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 $\S63.440(d)(3)(ii)(B)$ until the requirements of $\S63.440(d)(3)(ii)(A)$ 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 moniparameters specified toring 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(1). 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(1) 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 Aappendix 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 $0.64 \text{ cm} (0.25 \text{ in}) \text{ OD Teflon}^{\oplus}$ 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 $^{\circ}$.

(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.

40 CFR Ch. I (7-1-12 Edition)

(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 potassium iodide. Titrate immeg diately 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:

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

(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;

 $\begin{array}{l} S_U = Uncorrected \ sampling \ flow \ rate, \ L/min; \\ BP = Barometric \ pressure \ at \ time \ of \ sam- \\ \end{array}$

pling; 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:

 $Cl_2Moles = 1/8000 (5 T_N - T_A) \times N_{Thio}$

Where:

T_N=Volume neutral titer, ml;

 T_A =Volume acid titer (total), ml; and $N_{T_{hio}}$ =Normality of sodium thiosulfate titrant.

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

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

Where:

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

ts=Time sampled, minutes;

T_N=Volume neutral titer, ml;

 T_A =Volume acid titer (total), ml; and $N_{T_{Ho}}$ =Normality of sodium thiosulfate

titrant. (J) The following calculation shall be

performed to determine the moles of chlorine dioxide in the sample:

$$ClO_2$$
 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:

$$C1O_2 \text{ ppmv} = \frac{6010(T_A - T_N) \times N_{Thio}}{S_C \times t_S}$$

Where:

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

ts=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

40 CFR Ch. I (7-1-12 Edition)

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:

 \tilde{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=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 DL/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 BOD₅ in the effluent stream from an open biological treatment unit used to comply with \S 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 BOD₅. 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)(1), except during set up, the analytical laboratory conducting the analytical laboratory 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)(1) 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 closedvent systems as specified in $\S63.450$ or for pulping process wastewater collection systems as specified in $\S63.446(d)(2)(i)$, 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 nhexane 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 \S 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;

(2) As methanol.

or

(g) Condensate HAP concentration measurement. For purposes of complying with the kraft pulping condensate requirements in $\S63.446$, the owner or operator shall measure the total HAP concentration as methanol. For biological treatment systems complying with $\S63.446(e)(2)$, the owner or operator shall measure total HAP as acetaldehyde, methanol, methyl ethyl ketone, and propionaldehyde and follow the procedures in $\S63.457(1)(1)$ 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:

$$E = K_2 \left| \sum_{i=1}^{n} C_j M_j \right| Q_s$$

Where:

- E=Mass emission rate of total HAP from the sampled vent, kilograms per hour.
- $K_2=Constant, 2.494 \times 10^{-6}$ (parts per million by volume)⁻¹ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.
- C_j =Concentration on a dry basis of pollutant j in parts per million by volume as measured by the test methods specified in paragraph (b) of this section.
- M_j=Molecular weight of pollutant j, gram/ gram-mole.
- Q.=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:

$$R = \frac{E_i - E_0}{E_i} (100)$$

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.=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_{aj} =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:

§63.457

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

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

$$R = \frac{E_b - E_a}{E_b} \times 100$$

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_s=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)(i) 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.

40 CFR Ch. I (7-1-12 Edition)

(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.

(1) Biological treatment system percent reduction and mass removal calculations. To demonstrate compliance with the condensate treatment standards specified in $\S63.446(e)(2)$ and the monitoring requirements specified in $\S63.453(j)(3)$ 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:

$$R = \frac{f_{bio}(MeOH)}{(1+1.087(r))} * 100$$
$$r = \frac{F_{(nonmethanol)}}{F_{(methanol)}}$$

Where:

- R = Percent destruction.
- $f_{\rm bio}({\rm MeOH}) = {\rm The\ fraction\ of\ methanol\ removed in\ the\ biological\ treatment\ system.} \\ {\rm The\ site-specific\ biorate\ constants\ shall\ be\ determined\ using\ the\ appropriate\ procedures\ specified\ in\ appendix\ C\ of\ this\ part.}$
- 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 $\S63.446(e)(2)$ and (4), or $\S63.446(e)(2)$ and (5), the methanol mass removal shall be calculated using the following equation:

$$F = F_b * (f_{bio}(MeOH) / (1 + 1.087(r)))$$

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 proce-
- dures 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 $\S63.446(c)(3)$, 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)(i) 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 \S 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 \S 63.7(e)(2)(ii) and (f), as defined in \S 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 $\S63.10(f)$, as defined in $\S63.90$, 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)(i) if the owner or op-

40 CFR Ch. I (7-1-12 Edition)

erator 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	KIDILFAC	>0.0	None

§ 63.459

TABLE 2 TO SUBPART S-ISOTHERMAL COOKING SYSTEM OPERATIONAL VALUES-Continued

Parameter	Instrument number	Limit	Units
Difference in Digester Vapor Zone Tem- perature and Digester.	03TI0311	<10	Degrees F.
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 40 CFR Ch. I (7-1-12 Edition)

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:



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 $\S63.453(n)(1)$ 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 closedvent 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 closedvent 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 closedvent 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 closedvent systems, or portions of closedvent systems, the owner or operator shall demonstrate no detectable leaks as specified in paragraph (b)(6)(ii) of this section, measured initially and annually by the procedures in $\S63.457(d)$.

(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 value 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 value 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 40 CFR Ch. I (7–1–12 Edition)

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 $\S63.964$ except for the closed-vent system and control device inspection and monitoring requirements specified in $\S63.964(a)(2)$.

(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 DJ/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) Record keeping requirements. (i) The owner or operator shall comply with the record keeping requirements as specified in Table 1 of subpart S of part 63 as it pertains to §63.10.

Pt. 63, Subpt. S, Table 1

(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 $^{\rm A}$

Reference	Applies to Subpart S	Comment		
63.1(a)(1)–(3)	Yes			
63.1(a)(1)–(3) 63.1(a)(4)	Yes	Subpart S (this table) specifies applicability of each para- graph 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.		
	No	Subpart S and other cross-referenced subparts specify cal- endar or operating day.		
63.1(a)(11)-(14)	Yes			

Pt. 63, Subpt. S, Table 1

40 CFR Ch. I (7-1-12 Edition)

Reference	Applies to Subpart S	Comment
63.1(b)(1)	No	Subpart S specifies its own applicability.
63.1(b)(2)-(3)	Yes	
63.1(b)(2)-(3) 63.1(c)(1)-(2)	Yes	
63.1(C)(3)	No	Section reserved.
63.1(c)(4)-(5)	Yes	Contine record
63.1(d)	No Yes	Section reserved.
63.2	Yes	
63.3	Yes	
63.4(a)(1)	Yes	
63.4(a)(3).		
63.4(a)(4)	No Yes	Section reserved.
63.4(a)(5) 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	Contine many and
63.5(c) 63.5(d)	No Yes	Section reserved.
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 Yes	Section reserved.
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 63.8(a)(1)	Yes 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	1
63.8(c)(1)	Yes	
63.8(c)(2) 63.8(c)(3)	Yes Yes	Į.
63.8(c)(4)	No	Subpart S allows site specific determination of monitoring fre- quency 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 Yes	
63.8(d) 63.8(e)	Yes	
63.8(I)(1)–(5)	Yes	1
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 Yes	Special compliance requirements are only applicable to kraft mills.
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.

§63.460

Reference	Applies to Subpart S	Comment		
63.9(h)	Yes			
63.9(i)	Yes			
63.9(j)	Yes			
63.10(a)	Yes			
63.10(b)	Yes	ļ		
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			

•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]

Subpart T—National Emission Standards for Halogenated Solvent Cleaning

SOURCE: 59 FR 61805, Dec. 2, 1994, unless otherwise noted.

§63.460 Applicability and designation of source.

(a) The provisions of this subpart apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75-09-2). perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. The concentration of these solvents may be determined using EPA test method 18, material safety data sheets, or engineering calculations. Wipe cleaning activities, such as using a rag containing halogenated solvent or a spray cleaner containing halogenated solvent are not covered under the provisions of this subpart.

(b) Except as noted in appendix C (General Provisions Applicability to subpart T) of this subpart, the provisions of subpart A of this part (General Provisions) apply to owners or operators of any solvent cleaning machine meeting the applicability criteria of paragraph (a) of this section.

(c) Except as provided in paragraph (g) of this section, each solvent cleaning machine subject to this subpart that commenced construction or reconstruction after November 29, 1993 shall achieve compliance with the provisions of this subpart, except for $\S 63.471$, immediately upon start-up or by December 2, 1994, whichever is later.

(d) Except as provided in paragraph (g) of this section, each solvent cleaning machine subject to this subpart that commenced construction or reconstruction on or before November 29, 1993 shall achieve compliance with the provisions of this subpart, except for \$63,471, no later than December 2, 1997.

(e) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authority contained in paragraph (f) of this section shall be retained by the Administrator and not transferred to a State.

(f) [Reserved]

(g) Each continuous web cleaning machine subject to this subpart shall

APPENDIX E MACT MM

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§63.860

APPENDIX A TO SUBPART LL OF PART 63—APPLICABILITY OF GENERAL PROVISIONS
[40 CFR part 63, subpart A]

General provisions citation	Requirement	Applies to subpart LL	Comment
63.1(c)(2)		No	All are major sources.
63.2 Definition of "reconstruction"		No	Subpart LL defines "reconstruc- tion."
63.6(c)(1)	Compliance date for existing sources.	No	Subpart LL specifies compliance date for existing sources.
63.6(h)	Opacity/VE standards	Only in §63.845	Opacity standards applicable only when incorporating the NSPS requirements under § 63.845.
63.7(a)(2)(ii) and (iii)	Performance testing requirements	No	test dates.
63.8(c)(4)(c)(8)	CMS operation and maintenance	No	Subpart LL does not require COMS/CMS or CMS perform- ance specifications.
63.8(d)	Quality control	No	Subpart LL does not require CMS or CMS performance evalua- tion.
63.8(e)	Performance evaluation for CMS	No	
63.9(b)(1)–(5)	Initial notifications	Yes, except as noted in "com- ment" column.	§63.850(a)(9) includes require- ment for startup of an existing affected source that has been shut down.
63.9(e)	Notification of performance test	No	Subpart LL specifies notification of performance tests.
63.9(1)	Notification of VE or opacity test	Only in §63.845	Notification is required only when incorporating the NSPS require- ments under § 63.845.
63.9(g)	Additional CMS notification	No	
63.10(d)(2)	Performance test reports	No	Subpart LL specifies performance test reporting.
63.10(d)(3)	Reporting VE/opacity observa- tions.	Only in §63.845	Reporting is required only when incorporating the NSPS require- ments under § 63.845.
63.10(e)(2)	Reporting performance evalua- tions.	No	
63.11(a)-(b)	Control device requirements	No	Flares not applicable.

[62 FR 52407, Oct. 7, 1997, as amended at 70 FR 66285, Nov. 2, 2005]

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 $\S63.2$.

(b) Affected sources. The requirements of this subpart apply to each new or ex-

isting 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. 40 CFR Ch. 1 (7–1–12 Edition)

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 $\S63.862(a)(1)(ii)(E)(I)$, any physical change (excluding any routine part replacement or maintenance) or operational change (excluding any 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 40 CFR Ch. I (7–1–12 Edition)

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 $\S63.865(a)(1)$ 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)(i1)(A) of this section must not be less stringent than the emissions limitations required by $\S60.282$ of part 60 of this chapter for any kraft recovery furnace, smelt dissolving tank, or lime kiln that is subject to the requirements of $\S60.282$.

(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)(i)(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)(i)(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)(i)(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 (0.020 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 $\S63.6(b)$.

(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 semichemical combustion existing 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 $\S63.8(g)(2)$.

(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

40 CFR Ch. I (7-1-12 Edition)

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)(1) 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 specifications written 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 40 CFR Ch. I (7-1-12 Edition)

or operators of all affected sources or process units are required to implement corrective action 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 1hour 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 3hour 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 and the alarm is engaged for more than 5 percent of the total operating time in a 6month 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 24hour period.

[68 FR 7713, Feb. 18, 2003, as amended at 68 FR 42605, July 18, 2003; 68 FR 67955, Dec. 5, 2003; 71 FR 20458, Apr. 20, 2006]

§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 $\S63.7$ 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:

$$EL_{PM} = \frac{\left[\left(C_{ref,RF}\right)\left(Q_{RFtot}\right) + \left(C_{ref,LK}\right)\left(Q_{LKtot}\right)\right](F1)}{(BLS_{rot})} + ER1_{ref,SDT} \qquad (Eq. 1)$$

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.

- $Q_{RFtot} = sum of the average volumetric gas flow rates measured during the performance test and corrected to 8 percent oxygen for all existing recovery furnaces in the chemical recovery system at the kraft or soda pulp mill, dry standard cubic meters per minute (dscn/min) (dry standard cubic feet per minute (dscf/min)).$
- $C_{tef,LK}$ = reference concentration of 0.15 g/ dscm (0.064 gr/dscf) corrected to 10 percent oxygen for existing kraft or soda lime kilns.
- Q_{LKuot} = 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 (dsc/min). F1 = conversion feature 144
- 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

40 CFR Ch. I (7-1-12 Edition)

day (Mg/d) (tons per day (ton/d)) of black liquor solids fired.

 $\text{ERl}_{\text{ref. SDT}}$ = 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)(1) 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:

$$ER_{LK} = (F1)(C_{EL, LK})(Q_{LK})(CaO_{tot}/BLS_{tot})/(CaO_{LK})$$
(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_{ELLK}=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_{tex}=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:

$$\mathrm{ER}_{\mathrm{PUtot}} = \mathrm{ER}_{\mathrm{PU1}} (\mathrm{PR}_{\mathrm{PU1}} / \mathrm{PR}_{\mathrm{tot}}) + \ldots + (\mathrm{ER}_{\mathrm{PU1}}) (\mathrm{PR}_{\mathrm{PU1}} / \mathrm{PR}_{\mathrm{tot}}) \qquad (\mathrm{Eq. 5})$$

Where:

- ER_{PUtot}=overall PM emission rate from all similar process units, kg/Mg (lb/ton) of black liquor solids fired.
- ER_{PUI}=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.
- section. PR_{PUI}=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.
- unit No. 1, if process unit is a lime kiln. PR_{not}=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:

$$ER_{tot} = ER_{RFtot} + ER_{SDTtot} + ER_{LKtot}$$
 (Eq. 6)

ER_{tot}=overall PM emission rate for the chemical recovery system at the mill, kg/Mg (lb/ ton) of black liquor solids fired.

Where:

§63.865

- 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 (lbton) of black liquor solids fired.
- ER_{SDTet} =PM emission rate from all smelt dissolving tanks, calculated using Equation 3 or 5 in paragraphs (a)(2)(11) and (1v) 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

40 CFR Ch. I (7-1-12 Edition)

oxygen concentration using Equation 7 of this section as follows:

$$C_{corr} = C_{meas} \times \frac{(21 - X)}{(21 - Y)}$$
 (Eq. 7)

Where:

- Ccorr = 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 $\S63.862(a)(1)(ii)(A)$, the volumetric gas flow rate must be corrected to the appropriate oxygen concentration using Equation 8 of this section as follows:

$Q_{corr} = Qmeas \times (21 - Y)/(21 - X)$ (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 (dscl/ 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 complance 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:

$$ER_{NDCE} = \frac{(MR_{meas})}{BLS}$$
 (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:



Where:

- ER_{DCE} = Methanol emission rate from each DCE recovery furnace system, kg/Mg (lb/ ton) of black liquor solids fired;
- $MR_{mea,RF}$ = Average measured methanol mass emission rate from each DCE recovery furnace, kg/hr (lb/hr);
- MR_{mess,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:

$$ER_{SCCU} = \frac{(THC_{meas})}{BLS}$$
 (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.

40 CFR Ch. I (7-1-12 Edition)

(2) If the owner or operator of the semichemical combustion unit has selected the percentage reduction standards for THC, under 63.862(c)(2)(i), the percentage reduction in THC emissions is computed using Equation 12 of this section as follows, provided that Ei and Eo are measured simultaneously:

$$(\%R_{THC}) = \left(\frac{E_i - E_o}{E_i}\right) \times 100$$
 (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 a written plan as described in $\S63.6(e)(3)$ that contains specific procedures 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 $\S63.6(e)$, 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 $\S63.864(j)$, 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 $\frac{63.864(k)}{1}$, and when a violation is noted under $\frac{63.864(k)}{2}$.

(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 $\S63.864$, 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; 71 FR 20458, Apr. 20, 20061

§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 \S 63.862(a)(1)(ii) must submit the calculations and supporting documentation used in \S 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)(1) is shut down for more than 60 consecutive days;

(iii) A continuous monitoring parameter or the value or range of values of

§ 63.867

§ 63.868

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)(i)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.

40 CFR Ch. I (7-1-12 Edition)

(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 stand-

ards in §63.862 under §63.6(g). (2) Approval of major alternatives to

(2) Approval of major atternatives 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 $\S63.8(f)$ and as defined in $\S63.90$.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

General provisions reference	Summary of requirements	Applies to subpart MM	Explanation
63.1(a)(1)	General applicability of the General Provisions.	Yes	Additional terms defined In § 63.861; when overlap be- tween 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 determina- tion	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 de- termination.	No	All affected sources are sub- ject to subpart MM accord- ing to the applicability defini- tion of subpart MM.

TABLE 1 TO SUBPART MM OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART MM

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Pt. 63, Subpt. MM, Table 1

General provisions reference	Summary of requirements	Applies to subpart MM	Explanation
63.1(c)(1)	Applicability of subpart A of this part after a relevant standard has been set.	Yes	Subpart MM clarifies the appli- cability of each paragraph or subpart A of this part to sources subject to subpart MM.
63.1(c)(2)			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) 63.1(c)(4)	[Reserved] Requirements for existing source that obtains an ex- tension of compliance.	NA Yes.	
63.1(c)(5)	Notification requirements for an area source that in- creases 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 be- tween subparts A and MM of this part occurs, subpart MM takes precedence.
63.3	Units and abbreviations	Yes.	
63.4	Prohibited activities and cir- cumvention.	Yes.	
63.5(a)	Construction and reconstruc- tion-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/reconstruc- tion.	Yes.	
63.5(b)(4)	Construction/reconstruction notification.	Yes.	
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 require- ments—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 stipu- lates the compliance sched- ule 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 stand- ards.	Yes.	

Pt. 63, Subpt. MM, Table 1

40 CFR Ch. I (7-1-12 Edition)

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General provisions reference	Summary of requirements	Applies to subpart MM	Explanation
63.6(h)	Compliance with opacity and visible emissions (VE) standards.	Yes	Subpart MM does not contain any opacity or VE stand- ards; however, § 63.864 specifies opacity monitoring requirements.
53.6(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.	
53.7(a)(1)	Performance testing require- ments—applicability.	Yes	§63.865(c)(1) specifies the only exemption from per- formance testing allowed under subpart MM.
3.7(a)(2)	Performance test dates	Yes.	
53.7(a)(3)	Performance test requests by Administrator under CAA section 114.	Yes.	
63.7(b)(1)	Notification of performance test.	Yes.	
53.7(b)(2)	Notification of delay in con- ducting a scheduled per- formance test.	Yes.	
63.7(c)	Quality assurance program	Yes.	
53.7(d)	Performance testing facilities	Yes.	ļ
3.7(e)	Conduct of performance tests	Yes.	
53.7(f)	Use of an alternative test method.	Yes.	
53.7(g)	Data analysis, recordkeeping, and reporting.	Yes.	
63.7(h)	Waiver of performance tests	Yes	§ 63.865(c)(1) specifies the only exemption from per- formance testing allowed under subpart MM.
63.8(a)	Monitoring requirements-ap- plicability.	Yes	See § 63.864.
53.8(b)	Conduct of monitoring	Yes	See § 63.864.
3.8(c)	Operation and maintenance of CMS.	Yes	See § 63.864.
33.8(d) 53.8(e)(1)	Quality control program Performance evaluation of CMS.	Yes.	See § 63.864.
53.8(e)(2)	Notification of performance evaluation.	Yes.	
53.8(e)(3)	Submission of site-specific performance evaluation test plan.	Yes.	
63.8(e)(4)	Conduct of performance eval- uation and performance evaluation dates.	Yes.	
63.8(e)(5)	Reporting performance evalua- tion results.	Yes.	
53.8(f)	Use of an alternative moni- toring method.	Yes.	
53.8(g)	Reduction of monitoring data	Yes.	
33.9(a)	Notification requirements—ap- plicability and general infor- mation.	Yes.	
53.9(b)	Initial notifications	Yes.	
3.9(c)	Request for extension of com- pliance.	Yes.	
i3.9(d)	Notification that source subject to special compliance re- quirements.	Yes.	
63.9(e)	Notification of performance test.	Yes.	
53.9(1)	Notification of opacity and VE observations.	Yes	Subpart MM does not contain any opacity or VE stand- ards; however, § 63.864 specifies opacity monitoring requirements.
63.9(q)(1)	Additional notification require-	Yes.	raquiteriterits.

§63.900

General provisions reference	Summary of requirements	Applies to subpart MM	Explanation
53.9(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.
53.9(g)(3)	Notification that criterion to continue use of alternative to relative accuracy testing has been exceeded.	Yes.	
63.9(h)	Notification of compliance sta- tus.	Yes.	
53.9(l)	Adjustment to time periods or postmark deadlines for sub- mittal and review of required communications.	Yes.	
63.9(j)	Change in information already provided.	Yes.	
63.10(a)	Recordkeeping requirements	Yes	See § 63.866.
63.10(b)(1) 63.10(b)(2)	Records retention Information and documentation to support notifications and demonstrate compliance.	Yes. Yes.	
53.10(b)(3)	Records retention for sources not subject to relevant standard.	Yes	Applicability requirements are given in § 63.860.
63.10(c)	Additional recordkeeping re- quirements for sources with CMS	Yes.	
63.10(d)(1)	General reporting require- ments.	Yes.	
63.10(d)(2)	Reporting results of perform- ance tests.	Yes.	
63.10(d)(3)	Reporting results of opacity or VE observations.	Yes	Subpart MM does not include any opacity or VE stand- ards; however, § 63.864 specifies opacity monitoring requirements.
63.10(d)(4) 63.10(d)(5)	Progress reports Periodic and immediate start- up, shutdown, and malfunc- tion reports.	Yes. Yes.	
63.10(e)	Additional reporting require- ments for sources with CMS.	Yes.	
63.10(f)	Waiver of recordkeeping and reporting requirements.	Yes.	The use of flares to must the
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 delega- tions.	Yes.	
63.13	Addresses of State air pollu- tion control agencies and EPA Regional Offices.	Yes.	
63.14 63.15	Incorporations by reference Availability of information and confidentiality.	Yes. Yes.	

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001]

Subpart OO—National Emission Standards for Tanks—Level 1

SOURCE: 61 FR 34184, July 1, 1996, unless otherwise noted.

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§63.900 Applicability.

The provisions of this subpart apply to the control of air emissions from tanks for which another subpart of 40 CFR parts 60, 61, or 63 references the

APPENDIX F CEM Standards

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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, <u>MONITORING REQUIREMENTS</u> and SECTION IV, <u>QUALITY ASSURANCE/QUALITY CONTROL</u>.
- 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 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 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 PST's 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 calendar 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.
- G. 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.
- I. 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
> 20% Relative Accuracy
> 10% Relative Accuracy
> 10% of the Applicable Standard
> 5% of the Applicable Standard
> 1.0 % O2 or CO2
> 20% Relative Accuracy

RATA

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

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- 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 placed back in service.

APPENDIX G 40 CFR 63 Subpart ZZZZ

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AUTHENTICATE

- 63.8802 What methods must I use to demonstrate compliance with the emission limitation for loop slitter adhesive use?
- 63.8806 How do I demonstrate initial compliance with the emission limitations?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.8810 How do I monitor and collect data to demonstrate continuous compliance?
- 63.8812 How do I demonstrate continuous compliance with the emission limitations?

NOTIFICATIONS, REPORTS, AND RECORDS.

- 63.8816 What notifications must I submit and when?
- 63.8818 What reports must I submit and when?
- 63.8820 What records must I keep? 63.8822 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.8826 What parts of the General Provisions apply to me?
- 63.8828 Who implements and enforces this subpart?
- 63.8830 What definitions apply to this subpart?
- TABLE 1 TO SUBPART MMMMM OF PART 63-EMISSION LIMITS
- TABLE 2 TO SUBPART MMMMM OF PART 63-OPERATING LIMITS FOR NEW OR RECON-STRUCTED FLAME LAMINATION AFFECTED SOURCES
- TABLE 3 TO SUBPART MMMMM OF PART 63-PERFORMANCE TEST REQUIREMENTS FOR NEW OR RECONSTRUCTED FLAME LAMINA-TION AFFECTED SOURCES
- TABLE 4 TO SUBPART MMMMM OF PART 63-INITIAL COMPLIANCE WITH EMISSION LIM-ITS
- TABLE 5 TO SUBPART MMMMM OF PART 63-CONTINUOUS COMPLIANCE WITH EMISSION LIMITS AND OPERATING LIMITS
- TABLE 6 TO SUBPART MMMMM OF PART 63-REQUIREMENTS FOR REPORTS
- TABLE 7 TO SUBPART MMMMM OF PART 63-APPLICABILITY OF GENERAL PROVISIONS TO SUBPART MMMMM

AUTHORITY: 42 U.S.C. 7401 et seg

SOURCE: 57 FR 61992, Dec. 29, 1992, unless otherwise noted.

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

SOURCE: 69 FR 33506, June 15, 2004, unless otherwise noted.

40 CFR Ch. I (7-1-11 Edition)

WHAT THIS SUBPART COVERS

§63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion en-gines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/ stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence,

you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) Affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) New stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006. (iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) Reconstructed stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in $\S63.2$ and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in \S 63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) Stationary RICE subject to limited requirements. (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of $\S63.6645(f)$.

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of $\S63.6645(f)$ and the requirements of $\S63.6645(f)$, 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(vi) Existing residential emergency stationary RICE located at an area source of HAP emissions;

(vii) Existing commercial emergency stationary RICE located at an area source of HAP emissions; or

(viii) Existing institutional emergency stationary RICE located at an area source of HAP emissions.

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less

40 CFR Ch. I (7–1–11 Edition)

than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010]

§63.6595 When do I have to comply with this subpart?

(a) Affected sources. (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the

applicable emission limitations and operating limitations no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) Area sources that become major sources. If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

EMISSION AND OPERATING LIMITATIONS

§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than

500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating

40 CFR Ch. I (7–1–11 Edition)

limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§63.6602 What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[75 FR 51589, Aug. 20, 2010]

§63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown

for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

GENERAL COMPLIANCE REQUIREMENTS

§63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment. in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010]

§ 63.6610

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in $\S63.6595$ and according to the provisions in $\S63.7(a)(2)$.

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or 40 CFR Ch. I (7–1–11 Edition)

an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the

engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in $\S63.7(e)(3)$. Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

C_i = concentration of CO or formaldehyde at the control device inlet,

- C_{o} = concentration of CO or formaldehyde at the control device outlet, and
- R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_{o} value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F}$$
 (Eq. 2)

Where:

- F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.
- 0.209 = Fraction of air that is oxygen, percent/100.
- F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).
- F_c = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

§63.6620

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_0}$$
 (Eq. 3)

Where:

 $X_{co2} = CO_2$ correction factor, percent.

5.9 = 20.9 percent O_2-15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the NO_X and SO_2 gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\% CO_2}$$
 (Eq. 4)

Where:

 $%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1)through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values

for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions:

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined

40 CFR Ch. 1 (7-1-11 Edition)

by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test. and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2 at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with

each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (5) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in $\S63.8(c)(1)$ and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in 63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions:

(4) An existing non-emergency, nonblack start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, nonblack start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, nonblack start landfill or digester gas stationary RICE located at an area source of HAP emissions;

(7) An existing non-emergency, nonblack start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, nonblack start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, nonblack start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, nonblack start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing 40 CFR Ch. I (7-1-11 Edition)

the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new: viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator

must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The

analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in \S 63.6645.

CONTINUOUS COMPLIANCE REQUIREMENTS

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b. Tables 2a and 2b. Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table

40 CFR Ch. I (7–1–11 Edition)

8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) Requirements for emergency stationary RICE. (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of

maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided

by the financial arrangement is limited to emergency power.

(2) If you own or operate an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed prior to June 12, 2006, you must operate the engine according to the conditions described in paragraphs (f)(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs (f)(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.

(iii) You may operate your emergency stationary RICE for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

NOTIFICATIONS, REPORTS, AND RECORDS

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500

brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should in40 CFR Ch. I (7–1–11 Edition)

clude the information in $\S63.9(b)(2)(i)$ through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in $\S63.7(b)(1)$.

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to $\S63.9(h)(2)(ii)$.

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to $\S63.10(d)(2)$.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

§63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must

cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in \S 63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual repursuant to 40 CFR ports 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in \S 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report

must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in $\S63.8(c)(8)$.

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this

40 CFR Ch. I (7-1-11 Edition)

subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in $\S63.10(b)(2)(xiv)$.

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in $\S63.10(b)(2)(viii)$.

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.
(1) Records described in

§63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in \S 63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in $\S63.8(f)(6)(i)$, if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE; (1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

\$63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action.

report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

OTHER REQUIREMENTS AND INFORMATION

§63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, 40 CFR Ch. I (7–1–11 Edition)

then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under $\S63.7(e)(2)(ii)$ and (f) and as defined in $\S63.90$.

(3) Approval of major alternatives to monitoring under $\S63.8(f)$ and as defined in $\S63.90$.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in $\S63.6610(b)$.

§63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.
Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by $\S63.6(e)(1)(i)$.

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous byproduct of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2 .

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply nonemergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste 40 CFR Ch. I (7–1–11 Edition)

materials and composed principally of methane and CO_2 .

Lean burn engine means any twostroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control:

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to

cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2 , nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (i.e., remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any fourstroke spark ignited engine where the

manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a nonroad engine as defined at 40 CFR 40 CFR Ch. I (7–1–11 Edition)

1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011]

TABLE 1A TO SUBPART ZZZZ OF PART 63—EMISSION LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SPARK IGNITION, 4SRB STATIONARY RICE > 500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

Pt. 63, Subpt. ZZZZ, Table 2a

For each	You must meet the following emission limitation, except during periods of startup	During periods of startup you must
1. 4SRB stationary RICE	 a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or. b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂. 	ing of the engine, not to exceed 30 minutes, after which time the non-startup emission limi- tations apply.1

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

TABLE 1b TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SPARK IGNITION 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS AND EXISTING SPARK IGNITION 4SRB STATIONARY RICE >500 HP LOCATED AT AN AREA SOURCE OF HAP EMIS-SIONS

As stated in §§ 63.6600, 63.6603, 63.6603 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions and existing 4SRB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each	You must meet the following operating limitation
 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 pmwd or less at 15 percent O₂ and using NSCR. 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 pmwd or less at 15 percent O₂ and using NSCR. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or 4SRB stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 pptvd or less at 15 percent O₂ and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 pmvd or less at 15 percent O₂ and not using NSCR; or 4SRB stationary RICE exhaust to 2.7 pmvd or less at 15 percent O₂ and not using NSCR; 	100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial perform- ance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. Comply with any operating limitations approved by the Admin- istrator.

[76 FR 12867, Mar. 9, 2011]

TABLE 2A TO SUBPART ZZZZ OF PART 63—EMISSION LIMITATIONS FOR NEW AND RE-CONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP AND NEW AND RECONSTRUCTED 4SLB STATIONARY RICE >250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

40 CFR Ch. I (7-1-11 Edition)

For each	You must meet the following emission limitation, except during periods of start- up	During periods of startup you must
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent 0 ₂ . If you commenced construction or recon- struction between December 19, 2002 and June 15, 2004, you may limit con- centration of formaldehyde to 17 ppmvd or less at 15 percent 0 ₂ until June 15, 2007.	Minimize the engine's time spent at idle and minimize the engine's startup lime at startup to a period needed for ap- propriate and safe loading of the en- gine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
2. 4SLB stationary RICE	 a. Reduce CO emissions by 93 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O₂. 	
3. CI stationary RICE	 a. Reduce CO emissions by 70 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O₂. 	

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

TABLE 2b TO SUBPART ZZZZ OF PART 63— OPERATING LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, NEW AND RECONSTRUCTED 4SLB STATIONARY RICE >250 HP LOCATED AT A MAJOR SOURCE OF HAP EMIS-SIONS, EXISTING COMPRESSION IGNITION STATIONARY RICE >500 HP, AND EXIST-ING 4SLB STATIONARY RICE >500 HP LOCATED AT AN AREA SOURCE OF HAP EMISSIONS

As stated in §§ 63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and compression ignition stationary RICE located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE >250 HP located at a major source of HAP emissions; existing compression ignition stationary RICE >500 HP; and existing 4SLB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each	You must meet the following operating limitation
 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst; or 4SLB sta- tionary RICE and CI stationary RICE complying with the re- quirement to limit the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE advaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB 	 a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.¹ Comply with any operating limitations approved by the Administrator.

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

[75 FR 51593, Aug. 20, 2010, as amended at 76 FR 12867, Mar. 9, 2011]

Pt. 63, Subpt. ZZZZ, Table 2c

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TABLE 2C TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING COMPRESSION IGNITION STATIONARY RICE LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS AND EXISTING SPARK IGNITION STATIONARY RICE ≤ 500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

As stated in §§ 63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE \leq 500 HP located at a major source of HAP emissions:

For each	You must meet the following require- ment, except during periods of startup	During periods of startup you must
1. Emergency stationary CI RICE and black start stationary CI RICE. 1	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ² b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, which- ever comes first, and replace as nec- essary. ³	Minimize the engine's time spent at Idle and minimize the engine's startup time at startup to a period needed for ap- propriate and safe loading of the en- gine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ³
 Non-Emergency, non-black start sta- tionary CI RICE < 100 HP. 	 a. Change oil and filter every 1,000 hours of operation or annually, which-ever comes first; ² b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, which-ever comes first, and replace as necessary.³ 	
3. Non-Emergency, non-black start CI sta- tionary RICE 100≤HP≤300 HP.	Limit concentration of CO in the sta- tionary RICE exhaust to 230 ppmvd or less at 15 percent O ₂ .	
4. Non-Ernergency, non-black start CI sta- tionary RICE 300 < HP ≤ 500.	 a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more. 	
5. Non-Emergency, non-black start sta- tionary CI RICE >500 HP.	 a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more. 	
 Emergency stationary SI RICE and black start stationary SI RICE.¹ 		
 Non-Emergency, non-black start sta- tionary SI RICE <100 HP that are not 2SLB stationary RICE. 		
 Non-Emergency, non-black start 2SLB stationary SI RICE < 100 HP. 	a. Change oil and filter every 4,320 hours of operation or annually, which- ever comes first; ² b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;	

40 CFR Ch. I (7-1-11 Edition)

For each	You must meet the following require- ment, except during periods of startup	During periods of startup you must
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. ³	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500.	Limit concentration of CO in the sta- tionary RICE exhaust to 225 ppmvd or less at 15 percent O ₂ .	
10. Non-emergency, non-black start 4SLB stationary RICE 100 < HP < 500.	Limit concentration of CO in the sta- tionary RICE exhaust to 47 ppmvd or less at 15 percent O ₂ .	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500.	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O ₂ .	
12. Non-emergency, non-black start land- fill or digester gas-fired stationary RICE 100≤HP≤500.	Limit concentration of CO in the sta- tionary RICE exhaust to 177 ppmvd or less at 15 percent O ₂ .	

¹ If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the re-quired schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice schedule until the emergency is over or the unacceptable risk under Federal, State, or local law, has abated. Sources must report any failure to perform the work practice on the schedule required as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law, has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. ² Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart. ³ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 51593, Aug. 20, 2010]

TABLE 2d TO SUBPART ZZZZ OF PART 63-REQUIREMENTS FOR EXISTING STATIONARY RICE LOCATED AT AREA SOURCES OF HAP EMISSIONS

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each	You must meet the following require- ment, except during periods of startup	During periods of startup you must
1. Non-Emergency, non-black start CI sta- tionary RICE ≤300 HP.	a. Change oil and filter every 1,000 hours of operation or annually, which- ever comes first; 1	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for ap- propriate and safe loading of the en- gine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, which- ever comes first, and replace as nec- essary.	
2. Non-Emergency, non-black start CI sta- tionary RICE 300 <hp≤500.< td=""><td>a. Limit concentration of CO in the sta- tionary RICE exhaust to 49 ppmvd at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</td><td></td></hp≤500.<>	a. Limit concentration of CO in the sta- tionary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI sta- tionary RICE > 500 HP.	 a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more. 	1
 Emergency stationary CI RICE and black start stationary CI RICE.² 	 a. Change oil and filter every 500 hours of operation or annually, whichever comes first; 1 b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and 	

Pt. 63, Subpt. ZZZZ, Table 2d

For each	You must meet the following require- ment, except during periods of startup	During periods of startup you must
	 c. Inspect all hoses and belts every 500 hours of operation or annually, which- ever comes first, and replace as nec- essary. 	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emer-	a. Change oil and filter every 500 hours of operation or annually, whichever	
gency, non-black start 4SLB stationary RICE > 500 HP that operate 24 hours or less per calendar year; non-emer-	of operation or annually, whichever	
gency, non-black start 4SRB stationary RICE > 500 HP that operate 24 hours or less per calendar year. ²	comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, which- ever comes first, and replace as nec-	
6. Non-emergency, non-black start 2SLB stationary RICE.	essary. a. Change oil and filter every 4,320 hours of operation or annually, which- ever comes first; ¹	
	 b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and 	
	 c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as 	
 Non-emergency, non-black start 4SLB stationary RICE ≤ 500 HP. 	necessary. a. Change oil and filter every 1,440 hours of operation or annually, which- ever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB stationary RICE > 500 HP.	 a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O₂; or b. Reduce CO emissions by 93 percent 	
 Non-emergency, non-black start 4SRB stationary RICE ≤ 500 HP. 	or more. a. Change oil and filter every 1,440 hours of operation or annually, which-	
,	ever comes first; 1 b. Inspect spark plugs every 1,440 hours of operation or annually, whichever	
	comes first; and c. Inspect all hoses and bells every 1,440 hours of operation or annually, whichever comes first, and replace as	
10. Non-emergency, non-black start 4SRB stationary RICE > 500 HP.	the stationary RICE exhaust to 2.7 ppmvd at 15 percent O ₂ ; or	
11. Non-emergency, non-black start land-		
fill or digester gas-fired stationary RICE.	hours of operation or annually, which- ever comes first; 1 b. Inspect spark plugs every 1,440 hours	
	of operation or annually, whichever comes first; and c. Inspect all hoses and belts every	
	1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

¹ Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.
² If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has bated. The management practice is or local law has abated. Sources must report any failure to perform the management practice on the schedule source sources requirements and the Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under required and the Federal, State or local haw near the schedule required and the Federal, State or local haw near the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

40 CFR Ch. I (7-1-11 Edition)

[75 FR 51595, Aug. 20, 2010]

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TABLE 3 TO SUBPART ZZZZ OF PART 63-SUBSEQUENT PERFORMANCE TESTS

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each	Complying with the requirement to	You must
 New or reconstructed 2SLB stationary RICE with a brake horsepower >500 lo- cated at major sources; new or recon- structed 4SLB stationary RICE with a brake horsepower ≥250 located at major sources; and new or recon- structed CI stationary RICE with a brake horsepower >500 located at major sources. 	Reduce CO emissions and not using a CEMS.	Conduct subsequent performance tests semiannually. ¹
 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources. 	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.1
 Stationary RICE with a brake horse- power > 500 located at major sources and new or reconstructed 4SLB sta- tionary RICE with a brake horsepower 250 ≤ HP ≤ 500 located at major sources. 	Limit the concentration of formaldehyde in the stationary RICE exhaust.	Conduct subsequent performance tests semiannually. ¹
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE; existing non-emer- gency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year that are not limited use stationary RICE.	Limit or reduce CO or formaldehyde emissions.	Conduct subsequent performance tests every 8,760 hrs. or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower > 500 that are limited use stationary RICE; existing non-emer- gency, non-black start 45LB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower > 500 that are operated more than 24 hours per calendar year and are limited use stationary RICE.	Limit or reduce CO or formaldehyde emissions.	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

¹ After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 51596, Aug. 20, 2010]

TABLE 4 TO SUBPART ZZZZ OF PART 63-REQUIREMENTS FOR PERFORMANCE TESTS

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each	Complying with the requirement to	You must	Using	According to the following re- quirements
1. 2SLB, 4SLB, and CI stationary RICE.	a. Reduce CO emissions.	i. Measure the O ₂ at the inlet and outlet of the con- trol device; and	(1) Portable CO and O ₂ ana- lyzer.	(a) Using ASTM D6522–00 (2005) * (incorporated by reference, see § 63.14). Measurements to deter- mine O ₂ must be made at the same time as the measurements for CO con- centration.

Pt. 63, Subpt. ZZZZ, Table 4

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For each	Complying with the requirement to	You must	Using	According to the following re- quirements
		li. Measure the CO at the inlet and the outlet of the control device.	(1) Portable CO and O ₂ ana- lyzer.	(a) Using ASTM D6522-00 (2005) * ^b (incorporated by reference, see § 63.14) or Method 10 of 40 CFR ap- pendix A. The CO con- centration must be at 15 percent O ₂ , dry basis.
2. 4SRB stationary RICE.	a. Reduce form- aldehyde emis- sions.	i. Select the sam- pling port loca- tion and the number of tra- verse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).	(a) Sampling sites must be located at the inlet and cut let of the control device.
		il. Measure O ₂ at the inlet and out- let of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00m (2005).	(a) Measurements to deter- mine O ₂ concentration must be made at the same time as the measurements for formaldehyde con- centration.
		iii. Measure mois- ture content at the inlet and out- let of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03.	(a) Measurements to deter- mine moisture content must be made at the same time and location as the measurements for form- aldehyde concentration.
		iv. Measure form- aldehyde at the inlet and the out- let of the control device.	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, e pro- vided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130.	(a) Formaldehyde concentra- tion must be at 15 percent O ₂ , dry basis. Results of this test consist of the av- erage of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the con- centration of formaldehyde or CO in the sta- tionary RICE ex- haust.	i. Select the sam- pling port loca- tion and the number of tra- verse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to deter- mine O ₂ concentration must be made at the same time and location as the measurements for form- aldehyde concentration.
		lii. Measure mois- ture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03.	(a) Measurements to deter- mine moisture content must be made at the same time and location as the measurements for form- aldehyde concentration.
		iv. Measure form- aldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, e pro- vided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130.	(a) Formaldehyde concentra- tion must be at 15 percent O ₂ , dry basis. Results of this test consist of the av- erage of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.	(a) CO Concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour longer runs.

A You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.
 bYou may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

40 CFR Ch. I (7-1-11 Edition)

•You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[75 FR 51597, Aug. 20, 2010]

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TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS AND OPERATING LIMITATIONS

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each	Complying with the requirement to	You have demonstrated initial compli- ance if
 New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or re- constructed non-emergency 4SLB sta- tionary RICE >250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non- emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB sta- tionary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year. 	a. Reduce CO emissions and using oxi- dation catalyst, and using a CPMS.	 i. The average reduction of emissions of CO determined from the initial per- formance test achieves the required CO percent reduction; and ii. You have installed a CPMS to con- tinuously monitor catalyst inlet tem- perature according to the require- ments in § 63.6625(b); and iii. You have recorded the catalyst pres- sure drop and catalyst inlet tempera- ture during the initial performance test.
 Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emer- gency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year. 	 a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS. 	 The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and You have installed a CPMS to con- tinuously monitor catalyst inlet tem- perature according to the require- ments in § 63.6625(b); and You have recorded the catalyst pres- sure drop and catalyst inlet tempera- ture during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or re- constructed non-emergency 4SLB sta- tionary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non- emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB sta- tionary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year.	a. Reduce CO emissions and not using oxidation catalyst.	 The average reduction of emissions of CO determined from the initial per- formance test achieves the required CO percent reduction; and ii. You have installed a CPMS to con- tinuously monitor operating param- eters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved op- erating parameters (if any) during the initial performance test.
More than 24 hours per catenoar year. 4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year.	a. Limit the concentration of CO, and not using oxidation catalyst.	 The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and You have recorded the approved operating parameters (if any) during the initial performance test.

Pt. 63, Subpt. ZZZZ, Table 5

For each	Complying with the requirement to	You have demonstrated initial compli- ance if
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or re- constructed non-emergency 4SLB sta- tionary RICE >250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non- emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB sta- tionary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year.	a. Reduce CO emissions, and using a CEMS.	 You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at both the Inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emer- gency 45LB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year.	a. Limit the concentration of CO, and using a CEMS.	 i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
 Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are oper- ated more than 24 hours per calendar year. 	a. Reduce formaldehyde emissions and using NSCR.	
 Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are oper- ated more than 24 hours per calendar year. 	a. Reduce formaldehyde emissions and not using NSCR.	 The average reduction of emissions of formaldehyde determined from the ini- tial performance test is equal to or greater than the required formalde- hyde percent reduction; and You have installed a CPMS to con- tinuously monitor operating param- eters approved by the Administrator (if any) according to the requirements in §63.6625(b); and You have recorded the approved op- erating parameters (if any) during the
 Existing non-emergency 4SRB sta- tionary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year. 	a. Limit the concentration of formalde- hyde and not using NSCR.	Initial performance test. i. The average formaldehyde concentra- tion determined from the Initial per- formance test is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to con- tinuously monitor operating param- eters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved op- erating parameters (if any) during the initial performance test.

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40 CFR Ch. I (7-1-11 Edition)

For each	Complying with the requirement to	You have demonstrated initial compli- ance if
 New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or recon- structed non-emergency 4SLB sta- tionary RICE 250sHP:500 located at a major source of HAP, and existing non- emergency 4SRB stationary RICE >500 HP. 	a. Limit the concentration of formalde- hyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	 The average formaldehyde concentra- tion, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and You have installed a CPMS to con- tinuously monitor catalyst inlet tem- perature according to the require- ments in § 63.6625(b); and You have recorded the catalyst pres- sure drop and catalyst inlet tempera- ture during the inlial performance test.
11. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or recon- structed non-emergency 4SLB sta- tionary RICE 250≤HP≤500 located at a major source of HAP, and existing non- emergency 4SRB stationary RICE >500 HP.	a. Limit the concentration of formalde- hyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	 The average formaldehyde concentration, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (ii any) according to the requirements in §63.6625(b); and You have recorded the approved operating parameters (if any) during the
12. Existing non-emergency stationary RICE 1005HPS500 located at a major source of HAP, and existing non-emer- gency stationary CI RICE 300-HP≤500 located at an area source of HAP.	a. Reduce CO or formaldehyde emis- sions.	initial performance test. i. The average reduction of emissions of CO or formaldehyde, as applicable de- termined from the initial performance test is equal to or greater than the re- quired CO or formaldehyde, as appli- cable, percent reduction.
 Existing non-emergency stationary RICE 1005HP5500 located at a major source of HAP, and existing non-emer- gency stationary CI RICE 300-KHP5500 located at an area source of HAP. 	 a. Limit the concentration of formalde- hyde or CO in the stationary RICE ex- haust. 	1. The average formaldehyde or CO con- centration, as applicable, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limi- tation, as applicable.

[76 FR 12867, Mar. 9, 2011]

TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS, OPERATING LIMITATIONS, WORK PRACTICES, AND MANAGEMENT PRACTICES

As stated in 63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each	Complying with the requirement to	You must demonstrate continuous com- pliance by
 New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or re- constructed non-emergency 4SLB sta- tionary RICE >250 HP located at a major source of HAP, and new or re- constructed non-emergency CI sta- tionary RICE >500 HP located at a major source of HAP. 	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS.	 i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; and ii. Collecting the catalyst inlet tempera- ture data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling aver- ages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and dem- onstrating that the pressure drop across the catalyst is within the oper- ating limitation established during the performance test.

Pt. 63, Subpt. ZZZZ, Table 6

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For each	Complying with the requirement to	You must demonstrate continuous com- pliance by
 New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or re- constructed non-emergency 4SLB sta- tionary RICE >250 HP located at a major source of HAP, and new or re- constructed non-emergency CI sta- tionary RICE >500 HP located at a major source of HAP. 	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS.	 Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;* and Collecting the approved operating pa- rameter (if any) data according to §63.6525(b); and Reducing these data to 4-hour rolling averages; and Maintaining the 4-hour rolling aver- ages within the operating limitations
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or re- constructed non-emergency 4SLB sta- tionary RICE >250 HP located at a major source of HAP, new or recon- structed non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS.	 ages within the Operating initiations for the operating parameters established during the performance test. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration
 >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year. 4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of 	a. Reduce formaldehyde emissions and using NSCR.	tion limit; and liii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in ac- cordance with 40 CFR part 60, appen- dix F, procedure 1. I. Collecting the catalyst inlet tempera- ture data according to §63.6625(b);
Нар.		 and Reducing these data to 4-hour rolling averages; and Maintaining the 4-hour rolling aver- ages within the operating limitations for the catalyst iniet temperature; and Measuring the pressure drop across the catalyst once per month and dem- onstrating that the pressure drop across the catalyst is within the oper- ating limitation established during the
 Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP. 	 a. Reduce formaldehyde emissions and not using NSCR. 	performance test. i. Collecting the approved operating pa- rameter (if any) data according to § 63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and iii. Maintaining the 4-hour rolling aver- ages within the operating limitations
 Non-emergency 4SRB stationary RICE with a brake HP 25,000 located at a major source of HAP. 	a. Reduce formaldehyde emissions	for the operating parameters estab- lished during the performance test. Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde per-
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or recon- structed non-emergency 4SLB sta- tionary RICE 250 ≤HP≤500 located at a major source of HAP.	a. Limit the concentration of formalde- hyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	 cent reduction is achieved.* i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;* and ii. Collecting the catalyst inlet tempera- ture data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling aver- ages within the operating limitations for the catalyst inlet temperature; and

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40 CFR Ch. I (7-1-11 Edition)

For each	Complying with the requirement to	You must demonstrate continuous com- pliance by
3. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or recon- structed non-emergency 4SLB sta- tionary RICE 250 ≤HP≤500 located at a major source of HAP.	a. Limit the concentration of formalde- hyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	 v. Measuring the pressure drop acros the catalyst once per month and dem onstrating that the pressure dro across the catalyst is within the ope ating limitation established during th performance test. i. Conducting semiannual performance tests for formaldehyde to demonstratiant that your emissions remain at obelow the formaldehyde concentratio limit, and ii. Collecting the approved operating pr rameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rollin averages; and iv. Maintaining the 4-hour rolling ave ages within the operating limitation
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CIRICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an ar	a. Work or Management practices	for the operating parameters estal lished during the performance test. I. Operating and maintaining the st tionary RICE according to the man facturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maint nance plan which must provide to the extent practicable for the maintenan- and operation of the engine in a ma ner consistent with good air pollutic control practice for minimizing emi- sions.
an also solution of the status of the statu	a. Reduce CO or formaldehyde emis- sions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR.	 Conducting performance tests eve 8,760 hours or 3 years, whichev comes first, for CO or formaldehyd as appropriate, to demonstrate th the required CO or formaldehyde, appropriate, percent reduction achieved or that your emissions i main at or below the CO or formald hyde concentration limit; and Collecting the catalyst inlet temper ture data according to \$63.6625(and Reducing these data to 4-hour rolling averages; and Maintaining the 4-hour rolling to the averages; and
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE.	sions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR.	ages within the operating limitatio for the catahyst link temperature; an v. Measuring the pressure drop acro the catalyst once per month and de onstrating that the pressure dri across the catalyst is within the op ating limitation established during the performance test. I. Conducting performance tests evv. 8,760 hours or 3 years, whichei comes first, for CO or formatidehy

Pt. 63, Subpt. ZZZZ, Table 7

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For each	Complying with the requirement to	You must demonstrate continuous com- pliance by
12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year.	a. Reduce CO or formaldehyde emis- sions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR.	 ii. Collecting the approved operating parameter (if any) data according to § 53.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages; and iv. Conducting performance test. iv. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde, hyde concentration limit; and iv. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year.	a. Reduce CO or formaldehyde emis- sions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using an oxi- dation catalyst or NSCR.	 iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. i. Conducting performance tests every 8,760 hours or 5 years, whicheven comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde, as (S-26)(b); and ii. Collecting the approved operating parameter (if any) data according to \$63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

 After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[76 FR 12870, Mar. 9, 2011]

TABLE 7 TO SUBPART ZZZZ OF PART 63-REQUIREMENTS FOR REPORTS

As stated in §63.6650, you must comply with the following requirements for reports:

For each	You must submit a	The report must contain	You must submit the report
stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emer- gency, non-black stat stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB sta- tionary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; ex- isting non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP and op- erated more than 24 hours per calendar year; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or recon- structed non-emergency 4SLB stationary RICE 250 HP <500 located at a major source of HAP.	Compliance report	 a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during the reporting period, the CMS, including CEMS was out-of-control during the reporting period; or, b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.8650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8650(d); or. c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4). 	 merical emission limitations. i. Semiannually according to the requirements in § 63.6650(b). i. Semiannually according to the requirements in § 63.6650(b).
 New or reconstructed non-emergency sta- tionary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. 	Report	 a. The fuel flow rate of each fuel and the heating values that were used in your cal- culations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and. b. The operating limits provided in your fed- erally enforceable permit, and any devi- ations from these limits; and. 	§ 63.6650.
		c. Any problems or errors suspected with the meters	i. See item 2.a.i.

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40 CFR Ch. I (7-1-11 Edition)

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Pt. 63, Subpt. ZZZZ, Table 8

[75 FR 51603, Aug. 20, 2010]

TABLE 8 TO SUBPART ZZZZ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to sub- part	Explanation
§63.1	General applicability of the General Provisions.	Yes.	
\$ 63.2	Definitions	Yes	Additional terms defined in §63.6675
63.3	Units and abbreviations	Yes.	-
63.4	Prohibited activities and circumven- tion.	Yes.	
63.5	Construction and reconstruction	Yes.	
63.6(a)	Applicability	Yes.	
63.6(b)(1)(4)	Compliance dates for new and recon- structed sources.	Yes.	
63.6(b)(5)	Notification	Yes.	
63.6(b)(6)	[Reserved]	ļ	
63.6(b)(7)	Compliance dates for new and recon- structed area sources that become malor sources.	Yes.	
63.6(c)(1)-(2)	Compliance dates for existing sources.	Yes.	
§63.6(c)(3)-(4)	[Reserved]	l	
§63.6(c)(5)	Compliance dates for existing area sources that become major sources.	Yes.	
63.6(d)	[Reserved]	1	
63.6(e)	Operation and maintenance	No.	
63.6(1)(1)	Applicability of standards	No.	
63.6(f)(2)	Methods for determining compliance	Yes.	
63.6(1)(3)	Finding of compliance	Yes.	
63.6(g)(1)–(3) 63.6(h)	Use of alternate standard Opacity and visible emission stand- ards.	Yes. No	Subpart ZZZZ does not contain opar
63.6(i)	aros. Compliance extension procedures and criteria.	Yes.	ity or visible emission standards.
63.6(i)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610, 63.661 and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applie as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applie as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies a specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting perform- ance tests.	No	Subpart ZZZZ specifies conditions for conducting performance tests a \$63.6620.
§63.7(e)(2)	Conduct of performance tests and re- duction of data.	Yes	Subpart ZZZZ specifies test method at § 63.6620.
\$63.7(e)(3)	Test run duration	Yes.	
63.7(e)(4)	Administrator may require other test- ing under section 114 of the CAA.	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
63.7(g)	Performance test data analysis, rec- ordkeeping, and reporting.	Yes.	
63.7(h)	Walver of tests	Yes.	
;63.8(a)(1)	Applicability of monitoring require- ments.	Yes	Subpart ZZZZ contains specific ro quirements for monitoring § 63.6625.
63.8(a)(2)	Performance specifications	Yes.	
63.8(a)(3)	[Reserved]	1	1
§ 63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
63.8(b)(2)-(3)	Multiple effluents and multiple moni- toring systems.	Yes.	
§ 63.8(c)(1)	Monitoring system operation and maintenance.	Yes.	
0.00.0/->///>	Routine and predictable SSM	Vac	

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40 CFR Ch. I (7-1-11 Edition)

General provisions citation	Subject of citation	Applies to sub- part	Explanation
§63.8(c)(1)(ii)	function Plan.	Yes.	
§ 63.8(c)(1)(iii)		Yes.	- -
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements.	Yes	Except that subpart ZZZZ does no require Continuous Opacity Moni toring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does no require COMS.
§ 63.8(d) § 63.8(e)	CMS quality control	Yes. Yes	Except for §63.8(e)(5)(ii), which ap
		Except that § 63.8(e) only applies as specified in § 63.6645.	plies to COMS.
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§ 63.8(1)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(I)(6) only applies as specified in §63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640.
) 63.9(a)	Applicability and State delegation of notification requirements.	Yes.	
§ 63.9(b)(1)–(5)	Initial notifications	Yes Except that §63.9(b) only applies as specified	Except that § 63.9(b)(3) is reserved.
§ 63.9(c)	Request for compliance extension	in §63.6645. Yes	Except that §63.9(c) only applies as
§63.9(d)	Notification of special compliance re- quirements for new sources.	Yes	specified in § 63.6645. Except that § 63.9(d) only applies a specified in § 63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(I)	Notification of visible emission (VE)/ opacity test.	No	Subpart ZZZZ does not contain opac ity or VE standards.
63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies a specified in §63.6645.
63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opac ity or VE standards.
§63.9(g)(3)	Notification that criterion for alter- native to RATA is exceeded.	Yes	If alternative is in use.
	N	Except that § 63.9(g) only applies as specified in § 63.6645. Yes	Except that notifications for source
\$63.9(h)(1)(6)	Notification of compliance status	Tes	using a CEMS are due 30 day after completion of performanc evaluations. §63.9(h)(4) is re served. Except that §63.9(h) only applies a
5 60 0/D	Adjustment of submitted dogdlines	Vac	specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines Change in previous information	Yes. Yes.	
§ 63.9(j) § 63.10(a)	Administrative provisions for record- keeping/reporting.	Yes.	
§ 63.10(b)(1)		Yes.	· ·
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to	Yes	For CO standard if using RATA alter
			native.

54

§ 63.7082

General provisions citation	Subject of citation	Applies to sub- part	Explanation
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS.	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opac- ity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports.	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports.	Yes	Except that §63.10(e)(3)(i) (C) is re- served.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

SOURCE: 69 FR 416, Jan. 5, 2004, unless otherwise noted.

WHAT THIS SUBPART COVERS

§63.7080 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for lime manufacturing plants. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§63.7081 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a lime manufacturing plant (LMP) that is a major source, or that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions, unless the LMP is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, beet sugar manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes. (1) An LMP is an establishment engaged in the manufacture of lime product (calcium oxide, calcium oxide with magnesium oxide, or dead burned dolomite) by calcination of limestone, dolomite, shells or other calcareous substances.

(2) A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year from all emission sources at the plant site.

(b) [Reserved]

§63.7082 What parts of my plant does this subpart cover?

(a) This subpart applies to each existing or new lime kiln(s) and their associated cooler(s), and processed stone handling (PSH) operations system(s) located at an LMP that is a major source.

(b) A new lime kiln is a lime kiln, and (if applicable) its associated lime cooler, for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in §63.7081 at the time you began construction or reconstruction.

(c) A new PSH operations system is the equipment in paragraph (g) of this

CERTIFICATE OF SERVICE

I, Pam Owen, hereby certify that a copy of this permit has been mailed by first class mail to

.

Green Bay Packaging Inc. (Arkansas Kraft Division), 338 Highway 113, Morrilton, AR, 72110,

on this 215° day of	October	, 2013.
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Pam Owen, AAII, Air Division