

For August 14, 2018 stakeholders meeting

WAC Sections

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- 173-405-086 New source review (NSR).
- 173-405-087 Prevention of significant deterioration (PSD).
- 173-405-091 Special studies.

Commented [SC(1): Section 040 (4) is removed to streamline this rule. There are existing federal requirements in 40 CFR Part 63, Subpart S that cover the collection, control, and destruction of (non-condensable gases) NCGs.

All other limits would require additional analysis since the non-WAC standards have different averaging periods, units of measure, or compliance requirements.

Commented [SC(2): Align with the section title in 173-400

WAC 173-405-012 Statement of purpose.

These rules are enacted under the provisions of the Washington Clean Air Act as amended (RCW [70.94.395](#)) to:

- (1) Assume state jurisdiction over emissions from kraft pulping mills to provide for the systematic control of air pollution in this industry and for the proper development of the state's natural resources; and
- (2) Establish technically feasible and reasonably attainable standards and revise such standards as new information and better technology are developed and become available.

WAC 173-405-021 Definitions.

The definitions of terms contained in chapter [173-400](#) WAC are incorporated into this chapter by reference. Unless a different meaning is clearly required by context, the following words and phrases as used in this chapter shall have the following meanings:

- (1) "Ecology" means the department of ecology.
- (2) "Kraft mill" means any manufacturing facility which uses an alkaline solution containing sodium hydroxide and/or sodium sulfide, and any other chemical pulping facility, except those covered by chapter [173-410](#) WAC, to produce pulp and/or paper products from wood fibers. For the purposes of this regulation "kraft mill" is equivalent to "source."
- (3) "Noncondensibles" means gases and vapors from the digestion and evaporation processes of a mill that are not condensed with the equipment used in those processes.
- (4) "Recovery furnace stack" means the stack from which the products of combustion from the recovery furnace are emitted to the ambient air.

WAC 173-405-033 Standards of performance.

The provisions of WAC [173-400-115](#) "Standards of performance for new sources" shall apply to all sources to which this chapter is applicable.

WAC 173-405-035 Emission standards for sources emitting hazardous air pollutants.

The provisions of WAC [173-400-075](#) "Emission standards for sources emitting hazardous air pollutants" shall apply to all sources to which this chapter is applicable.

WAC 173-405-040 Emission standards.

In addition to the general applicability of chapters [173-400](#) and [173-490](#) WAC to all emission sources; no kraft pulp mill shall cause or permit air contaminant emissions in excess of the limits listed below. Specific emission standards listed in this chapter will take precedence over the general emission standards of chapter [173-400](#) WAC.

- (1) Recovery furnaces.
 - (a) The particulate emissions from each recovery furnace stack shall not exceed 0.23 grams of particulate per dry cubic meter at standard conditions (0.10 grains/dscf) corrected to eight percent oxygen averaged over three one hour tests.
 - (b) The TRS emissions from each recovery furnace stack constructed before January 1, 1970, and for recovery furnaces that have direct contact evaporators, shall not exceed 17.5 ppm corrected to eight percent oxygen for a daily average.
 - (c) The TRS emissions from each recovery furnace constructed after January 1, 1970, which does not have a contact evaporator, shall not exceed 5.0 ppm corrected to eight percent oxygen for a daily average.
- (2) Smelt dissolver tank vent. The particulate emissions from smelt dissolver tank vents shall not exceed 0.15 grams per kilogram (0.30 pounds per ton) of solids fired at the associated recovery furnace.
- (3) Lime kilns.
 - (a) The particulate emission from each lime kiln stack shall not exceed 0.30 grams of particulate per dry cubic meter (0.13 grains/dscf) at standard conditions corrected to ten percent oxygen.
 - (b) The TRS emissions from any lime kiln stack shall not exceed eighty ppm expressed as hydrogen sulfide for more than two consecutive hours in any one day.
 - (c) The average daily emission of TRS from any lime kiln stack shall not exceed fifty ppm. After January 1, 1985, TRS emissions from each lime kiln stack shall not exceed twenty ppm corrected to ten percent oxygen for a daily average.
- (4) ~~Other TRS emissions units. Noncondensibles from digesters, multiple-effect evaporators and condensate stripper system shall at all times be treated to reduce the emissions of TRS equal to the reduction achieved by thermal oxidation in a lime kiln. A backup treatment system or equivalent approved by ecology must be installed to assure continual treatment.~~
- (5) Other particulate emissions units. The emission of particulates from emissions units other than kraft recovery furnaces, lime kilns, or smelt dissolving tank vents, shall not exceed the following maximums:

- (a) 0.46 grams per dry cubic meter at standard conditions (0.2 grains/dscf) corrected to seven percent oxygen, for units which combust wood and wood residue to produce steam and which commenced construction prior to January 1, 1983.
- (b) 0.12 grams per dry cubic meter at standard conditions (0.05 grains/dscf) corrected to seven percent oxygen, for units which combust fuel other than wood and wood residue to produce steam, and which commenced construction after January 1, 1983.
- (c) 0.23 grams per dry cubic meter at standard conditions (0.1 grains/dscf) corrected to seven percent oxygen in the case of combustion units, for units not classified under (a) or (b) of this subsection.

(6) Opacity.

(a) No person shall cause or allow the emission of a plume from any kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than thirty-five percent for more than six consecutive minutes in any sixty minute period, except as described in WAC 173-405-040(7).

~~(b)~~ No person shall cause or allow the emission of a plume, from any emissions unit other than a kraft recovery furnace, smelt dissolver tank, or lime kiln, which has an average opacity greater than twenty percent for more than six consecutive minutes in any sixty minute period. ~~except that these provisions do not apply when the emissions occur due to soot blowing/grate cleaning and the operator can demonstrate that the emissions will not exceed twenty percent opacity for more than fifteen minutes in any eight consecutive hours. The intent of this provision is to permit soot blowing and grate cleaning necessary to the operation of the boiler facility. This practice, except for testing and trouble shooting, is to be scheduled for the same approximate times each day and ecology shall be advised of the schedule. The emissions unit shall comply with the alternative visible emission standard for:~~

- ~~(i)~~ Soot blowing or grate cleaning in WAC 173-400-040 (2)(a); ~~and/or~~
- ~~(ii)~~ Hog fuel or wood fired boiler in operation before January 24, 2018 in WAC 173-400-040(2)(e).

~~(b)(c)~~ There shall be no more than one violation notice issued in any sixty minute period.

~~(e)(d)~~ These provisions (of WAC 173-405-040(6)) shall not apply when the presence of uncombined water is the only reason for the opacity of the plume to exceed the applicable maximum.

(7) Alternative emission limitation. An owner or operator may request an alternative emission limit (as defined in WAC 173-400-030) under:

- ~~(a)~~ WAC 173-400-081 for an action covered under a notice of construction application; or
- ~~(a)(b)~~ WAC 173-400-082 for a permit modification.

Commented [SC(3)]: Revise affirmative defense language and align with WAC 173-400-040.

Commented [SC(4)]: Align with SSM provisions in 400.

- ~~(7) Each mill may petition for, and ecology may establish by regulatory order, alternate opacity limits for a specific kraft recovery furnace or lime kiln, providing:~~
- ~~(a) The mill can demonstrate compliance; with all other applicable emission limits;~~
 - ~~and~~
 - ~~(b) Best practicable operation and maintenance procedures, as approved by ecology, are continuously employed.~~
- ~~(8) Any person electing to apply for exceptions per the provisions of WAC 173-405-040(7) shall submit a program acceptable to ecology. The program shall include the following information: The amount and concentration of suspended particulate material emitted during best practicable operating procedures, opacity recorded at such emission level, the type of equipment and procedures which will be used to demonstrate compliance and the time required for installation of the equipment.~~
- ~~(9) The opacity provisions of this chapter shall apply until an application is received by ecology, petitioning for a revised limit as allowed by WAC 173-405-040(7). After a petition is received, enforcement of the opacity provisions will be stayed until the application is rejected or a new limit is established.~~
- ~~(108)~~ Operation and maintenance. At all times, including periods of abnormal operation and upset conditions, owners and operators shall, to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practice. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to ecology which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- ~~(119)~~ SO₂.
- (a) The emission of sulfur dioxide from any recovery furnace or lime kiln shall not exceed five hundred ppm for an hourly average, corrected to eight percent oxygen for a recovery furnace or to ten percent oxygen for a lime kiln.
 - (b) The emission of sulfur dioxide from any emissions unit other than a recovery furnace or lime kiln shall not exceed one thousand ppm for an hourly average, corrected to seven percent oxygen for combustion units.
- ~~(1210)~~ Source testing. To demonstrate compliance with this chapter, the provisions of WAC 173-400-105 shall apply to all sources to which this chapter is applicable.

Commented [SC(5)]: Same as WAC 173-400-081 and 082 which are referenced in WAC 173-405-040(7).

WAC 173-405-045 Creditable stack height and dispersion techniques.

The provisions of WAC 173-400-200 shall apply to all sources to which this chapter is applicable.

WAC 173-405-061 More restrictive emission standards.

Ecology may establish more restrictive emission standards for new mills or for mills expanding existing facilities pursuant to WAC 173-400-110.

WAC 173-405-072 Monitoring requirements.

Each mill shall conduct routine monitoring of emissions in accordance with a program that has been approved by ecology. Results of the monitoring shall be reported monthly within fifteen days of the end of each calendar month, except that source testing results shall be submitted within sixty days of completion of each source testing. All reports shall include data as follows:

- (1) Particulate: The results of particulate measurements made on each source during the month.
- (2) TRS:
 - (a) The average TRS concentration expressed in units of the standard for each recovery furnace and lime kiln stack.
 - (b) The date, time and concentration of TRS for each TRS emissions violation and the total numbers of hours that exceed the standard.
- (3) Opacity or other continuous monitor:
 - (a) The date and time of opacity in excess of the standard.
 - (b) If equipment for continuous monitoring of opacity is not available, continuous monitoring of operating parameters may be required by a regulatory order as an alternate. If an alternate is approved, the date and time of each occurrence in excess of the regulatory order must be reported.
- (4) Production: The average daily production of air-dried unbleached pulp.
- (5) Other data: Each kraft mill shall furnish, upon request of ecology, such other pertinent data required to evaluate the mill's emissions or emission control program.

Commented [YS(6): Language has been updated to allow for a longer reporting timeframe for source testing. This will allow for the facilities to QA/QC the results themselves.

WAC 173-405-077 Excess emissions Report of startup, shutdown, breakdown or upset conditions.

The provisions of WAC ~~173-400-105(5)~~ 173-400-107, or 108 and 109 shall apply to all sources to which this chapter is applicable.

NOTE: WAC 173-400-107 is in effect until the effective date of EPA's removal from the SIP.

Commented [SC(7): Align with SSM provisions in 400.

WAC 173-405-078 Emission inventory.

The provisions of WAC 173-400-105(1) shall apply to all sources to which this chapter is applicable.

WAC 173-405-086 New source review (NSR).

The provisions of WAC 173-400-110 through 114 shall apply to all new sources and emissions

Commented [SC(8): Correct outdated reference

WAC 173-405-087 Prevention of significant deterioration (PSD).

The provisions of WAC ~~173-400-141~~ 173-400-700 through 750 shall apply to all new major sources and major modifications to which this chapter is applicable.

Commented [SC(9): Correct outdated reference.

WAC 173-405-091 Special studies.

Ecology may require such additional special studies relevant to process emissions and establish completion dates as it determines necessary.