**DIVISION 234**

**EMISSION STANDARDS FOR WOOD PRODUCTS  
INDUSTRIES**

[**NOTE**: Administrative Order DEQ 37 repealed applicable portions of SA 22, filed 6-7-68.]

**340-234-0010**

**Definitions**

The definitions in OAR 340-200-0020, 340-204-0010 and this rule apply to this division. If the same term is defined in this rule and 340-200-0020 or 340-204-0010, the definition in this rule applies to this division.

(1) "Acid Absorption Tower" means the device where the sodium carbonate and sulfur dioxide react to form a sodium sulfite solution prior to use as the cooking liquor.

(2) "Acid Plant" means the facility in which the cooking liquor is either manufactured or fortified when not associated with a recovery furnace.

(3) "Average Daily Emission" means the total weight of sulfur oxides emitted in each month divided by the number of days of production that month.

(4) "Average Daily Production" means air dry tons of unbleached pulp produced in a month, divided by the number of days of production in that month.

(5) "Average Operating Opacity" means the opacity of emissions determined using EPA Method 9 on any three days within a 12-month period which are separated from each other by at least 30 days; a violation of the average operating opacity limitation is judged to have occurred if the opacity of emissions on each of the three days is greater than the specified average operating opacity limitation.

(6) "Baseline emissions rate" means a source's actual emissions rate during the baseline period, as defined in OAR 340-200-0020, expressed as pounds of emissions per thousand square feet of finished product, on a 1/8" basis.

(7) "Blow System" means the storage chest, tank, or pit to which the digester pulp is discharged following the cook.

(8) "BLS" means Black Liquor Solids, dry weight.

(9) "Continual Monitoring:"

(a) As used in OAR 340-234-0200 through 340-234-0350 means sampling and analysis, in a timed sequence, using techniques which will adequately reflect actual emission levels or concentrations on an ongoing basis;

(b) As used in OAR 340-234-0400 through 340-234-0430 means sampling and analysis in a continuous or timed sequence, using techniques which will adequately reflect actual emission levels, ambient air levels, or concentrations on a continuous basis.

(10) "Continuous monitoring" means instrumental sampling of a gas stream on a continuous basis, excluding periods of calibration.

(11) "Continuous-Flow Conveying Methods" means methods which transport materials at uniform rates of flow, or at rates generated by the production process.

(12) "Daily Arithmetic Average" means the average concentration over the twenty-four hour period in a calendar day, or Department approved equivalent period, as determined by continuous monitoring equipment or reference method testing. Determinations based on EPA reference methods in accordance with the Department Source Sampling Manual consist of three separate consecutive runs having a minimum sampling time of sixty minutes each and a maximum sampling time of eight hours each. The three values for concentration (ppm or grains/dscf) are averaged and expressed as the daily arithmetic average which is used to determine compliance with process weight limitations, grain loading or volumetric concentration limitations and to determine daily emission rate.

(13) "Department" means the Department of Environmental Quality.

(14) "Emission" means a release into the atmosphere of air contaminants.

(15) "EPA Method 9" means the method for Visual Determination of the Opacity of Emissions From Stationary Sources described as Method 9 (average of 24 consecutive observations) in the Department Source Sampling Manual (January, 1992).

(16) "Fuel Moisture Content by Weight Greater Than 20 Percent" means bark, hogged wood waste, or other wood with an average moisture content of more than 20 percent by weight on a wet basis as used for fuel in the normal operation of a wood-fire veneer dryer as measured by ASTM D4442-84 during compliance source testing.

(17) "Fugitive Emissions" means dust, fumes, gases, mist, odorous matter, vapors or any combination thereof not easily given to measurement, collection, and treatment by conventional pollution control methods.

(18) "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.

(19) "Kraft Mill" or "Mill" means any industrial operation which uses for a cooking liquor an alkaline sulfide solution containing sodium hydroxide and sodium sulfide in its pulping process.

(20) "Lime Kiln" means any production device in which calcium carbonate is thermally converted to calcium oxide.

(21) "Maximum Opacity" means the opacity as determined by EPA Method 9 (average of 24 consecutive observations).

(22) "Modified Wigwam Waste Burner" means a device having the general features of a wigwam waste burner, but with improved combustion air controls and other improvements installed in accordance with design criteria approved by the Department.

(23) "Neutral Sulfite Semi-Chemical (NSSC) Pulp Mill" means any industrial operation which uses for cooking, a liquor prepared from a sodium carbonate solution and sulfur dioxide at a neutral pH, range 6-8.

(24) "Non-Condensibles" mean gases and vapors, contaminated with TRS compounds, from the digestion and multiple-effect evaporation processes of a mill.

(25) "Operations" includes plant, mill, or facility.

(26) "Other Sources:"

(a) As used in OAR 340-234-0200 through 340-234-0270 means sources of TRS emissions in a kraft mill other than recovery furnaces, lime kilns, smelt dissolving tanks, sewers, drains, categorically insignificant activities and wastewater treatment facilities including but not limited to:

(A) Vents from knotters, brown stock washing systems, evaporators, blow tanks, blow heat accumulators, black liquor storage tanks, black liquor oxidation system, pre-steaming vessels, tall oil recovery operations; and

(B) Any vent which is shown to contribute to an identified nuisance condition.

(b) As used in OAR 340-234-0400 through 340-234-0430 means sources of sulfur oxide emissions including, but not limited to washers, washer filtrate tanks, digester dilution tanks, knotters, multiple effect evaporators, storage tanks, any operation connected with the handling of condensate liquids or storage of condensate liquids, and any vent or stack which may be a significant contributor of sulfur oxide gases other than those mentioned in emission standard limitations (340-234-0410).

(27) "Particleboard" means matformed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.

(28) "Particulate Matter:"

(a) As used in OAR 340-234-0200 through 340-234-0350 means all solid or liquid material, other than uncombined water, emitted to the ambient air as measured by EPA Method 5 or an equivalent test method in accordance with the Department Source Sampling Manual. Particulate matter emission determinations by EPA Method 5 shall use water as the cleanup solvent instead of acetone, and consist of the average of three separate consecutive runs having a minimum sampling time of 60 minutes each, a maximum sampling time of eight hours each, and a minimum sampling volume of 31.8 dscf each;

(b) As used in OAR 340-234-0400 through 340-234-0430 means a small, discrete mass of solid matter, including the solids dissolved or suspended in liquid droplets but not including uncombined water;

(c) As used in OAR 340-234-0500 through 340-234-0530 means all solid or liquid material, other than uncombined water, emitted to the ambient air as measured in accordance with the Department Source Sampling Manual (January, 1992). Particulate matter emission determinations shall consist of the average of three separate consecutive runs. For sources tested using DEQ Method 7, each run shall have a minimum sampling time of one-hour, a maximum sampling time of eight hours, and a minimum sampling volume of 31.8 dscf. For sources tested using DEQ Method 8, each run shall have a minimum sampling time of 15 minutes and shall collect a minimum particulate sample of 100 mg. Veneer dryers, wood particle dryers, fiber dryers and press/cooling vents shall be tested with DEQ Method 7; and air conveying systems shall be tested with DEQ Method 8.

(29) "Parts Per Million (ppm)" means parts of a contaminant per million parts of gas by volume on a dry-gas basis (1 ppm equals 0.0001% by volume).

(30) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the Federal Government and any agencies thereof.

(31) "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.

(32) "Press/Cooling Vent" means any opening through which particulate and gaseous emissions from plywood, particleboard, or hardboard manufacturing are exhausted, either by natural draft or powered fan, from the building housing the process. Such openings are generally located immediately above the board press, board unloader, or board cooling area.

(33) "Production:"

(a) As used in OAR 340-234-0200 through 340-234-0270 means the daily amount of air-dried unbleached pulp, or equivalent, produced during the 24-hour period each calendar day, or Department approved equivalent period, and expressed in air-dried metric tons (admt) per day. The corresponding English unit is air-dried tons(adt) per day;

(b) As used in OAR 340-234-0300 through 340-234-0350 means the daily amount of virgin air-dried unbleached NSSC pulp, or equivalent, produced during the 24-hour period each calendar day, or Department approved equivalent period, expressed in air-dried metric tons (ADMT) per day. The corresponding English unit is air-dried tons (ADT) per day.

(34) "Recovery Furnace" means the combustion device in which dissolved wood solids are incinerated and pulping chemicals recovered from the molten smelt. For OAR 340-234-0200 through 340-234-0270, and where present, this term shall include the direct contact evaporator.

(35) "Recovery System" means the process by which all or part of the cooking chemicals may be recovered, and cooking liquor regenerated from spent cooking liquor, including evaporation, combustion, dissolving, fortification, and storage facilities associated with the recovery cycle.

(36) "Significant Upgrading of Pollution Control Equipment" means a modification or a rebuild of an existing pollution control device for which a capital expenditure of 50 percent or more of the replacement cost of the existing device is required, other than ongoing routine maintenance.

(37) "Smelt dissolving tank vent" means the vent serving the vessel used to dissolve the molten smelt produced by the recovery furnace.

(38) "Special Problem Area" means the formally designated Portland, Eugene-Springfield, and Medford AQMAs and other specifically defined areas that the Environmental Quality Commission may formally designate in the future. The purpose of such designation will be to assign more stringent emission limits as may be necessary to attain and maintain ambient air standards or to protect the public health or welfare.

(39) "Spent Liquor Incinerator" means the combustion device in which pulping chemicals are subjected to high temperature to evaporate the water, incinerate organics and reclaim the sodium sulfate (saltcake) and sodium carbonate.

(40) "Standard Dry Cubic Meter" means the amount of gas that would occupy a volume of one cubic meter, if the gas were free of uncombined water, at a temperature of 20° C. (68° F.) and a pressure of 760 mm of mercury (29.92 inches of mercury). The corresponding English unit is standard dry cubic foot. When applied to recovery furnace gases "standard dry cubic meter" requires adjustment of the gas volume to that which would result in a concentration of 8% oxygen if the oxygen concentration exceeds 8%. When applied to lime kiln gases "standard dry cubic meter" requires adjustment of the gas volume to that which would result in a concentration of 10% oxygen if the oxygen concentration exceeds 10%. The mill shall demonstrate that oxygen concentrations are below noted values or furnish oxygen levels and corrected pollutant data.

(41) "Tempering Oven" means any facility used to bake hardboard following an oil treatment process.

(42) "Sulfite Mill" or "Mill" means a pulp mill producing cellulose pulp using a cooking liquor consisting of sulfurous acid and/or a bisulfite salt.

(43) "Sulfur Oxides" means sulfur dioxide, sulfur trioxide, and other sulfur oxides.

(44) "Total Reduced Sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, and any other organic sulfides present expressed as hydrogen sulfide (H2S).

(45) "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness formed by slicing or peeling from a log.

(46) "Wigwam Waste Burner" means a burner which consists of a single combustion chamber, has the general features of a truncated cone, and is used for incineration of wastes.

(47) "Wood Fired Veneer Dryer" means a veneer dryer, which is directly heated by the products of combustion of wood fuel in addition to or exclusive of steam or natural gas or propane combustion.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: [DEQ 37, f. 2-15-72, ef. 3-1-72; DEQ 4-1993, f. & cert. ef. 3-10-93]; [DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77; DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 22-1995, f. & cert. ef. 10-6-95]; [DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 22-1995, f. & cert. ef. 10-6-95]; [DEQ 26, f. 3-31-71, ef. 4-25-71; DEQ 132, f. & ef. 4-11-77; DEQ 7-1979, f. & ef. 4-20-79; DEQ 22-1991, f. & cert. ef. 11-13-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 4-1995, f. & cert. ef. 2-17-95]; [DEQ 32, f. 11-23-71, ef. 12-15-71; DEQ 15-1980, f. & ef. 5-23-80; DEQ 4-1993, f. & cert. ef. 3-10-93]; [DEQ 37, f. 2-15-72, ef. 3-1-72; DEQ 4-1993, f. & cert. ef. 3-10-93]; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0005, 340-025-0150, 340-025-0220, 340-025-0305, 340-025-0350, 340-025-0410; DEQ 8-2007, f. & cert. ef. 11-8-07

**Wigwam Waste Burners**

**340-234-0100**

**Wigwam Waste Burners**

(1) Operation of wigwam waste burners is prohibited.

(2) Emissions from wigwam waste burners included in a source's netting basis as of October 18, 2007 shall not be subtracted from the netting basis, except as provided in OAR 340-222-0045.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: DEQ 37, f. 2-15-72, ef. 3-1-72; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0010; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0140**

**Existing Administrative Agency Orders**

The provisions of OAR 340-234-0100 supersede any specific existing agency orders directed against specific parties or persons to abate air pollution.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: SA 30 f. 6-7-68, ef. 8-1-68; DEQ 4-1993, f. & cert. ef. 3-10-93, Renumbered from 340-025-0080; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0027; DEQ 8-2007, f. & cert. ef. 11-8-07

**Kraft Pulp Mills**

[**NOTE**: Administrative Order DEQ 50 repealed previous OAR 340-025-0155 through 340-025-0195 (consisting of SA 38, filed 4-4-69).]

**340-234-0200**

**Statement of Policy and Applicability**

(1) Policy. Recent technological developments have enhanced the degree of malodorous emission control possible for the kraft pulping process. While recognizing that complete malodorous and particulate emission control is not presently possible, consistent with the meteorological and geographical conditions in Oregon, it is hereby declared to be the policy of the Department to:

(a) Require, in accordance with a specific program and time table for all sources at each operating mill, the highest and best practicable treatment and control of atmospheric emissions from kraft mills through the utilization of technically feasible equipment, devices, and procedures. Consideration will be given to the economic life of equipment, which when installed, complied with the highest and best practicable treatment requirement.

(b) Require degrees and methods of treatment for major and minor emission points that will minimize emissions of odorous gases and eliminate ambient odor nuisances.

(c) Require effective monitoring and reporting of emissions and reporting of other data pertinent to air quality or emissions. The Department will use these data in conjunction with ambient air data and observation of conditions in the surrounding area to develop and revise emission and ambient air standards, and to determine compliance therewith.

(d) Encourage and assist the kraft pulping industry to conduct a research and technological development program designed to progressively reduce kraft mill emissions, in accordance with a definite program, including specified objectives and time schedules.

(2) Applicability. OAR 340-234-0200 through 340-234-0270 apply to existing and new kraft pulp mills.

[**NOTE**: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0155

**340-234-0210**

**Emission Limitations**

(1) Emission of Total Reduced Sulfur (TRS):

(a) Recovery Furnaces:

(A) The emissions of TRS from each recovery furnace placed in operation before January 1, 1969, shall not exceed 10 ppm and 0.15 Kg/metric ton (0.30 lb./ton) of production as daily arithmetic averages;

(B) TRS emissions from each recovery furnace placed in operation after January 1, 1969, and before September 25, 1976, or any recovery furnace modified significantly after January 1, 1969, and before September 25, 1976, to expand production shall be controlled such that the emissions of TRS shall not exceed 5 ppm and 0.075 Kg/metric ton(0.150 lb./ton) of production as daily arithmetic averages.

(b) Lime Kilns. Lime kilns shall be operated and controlled such that emissions of TRS shall not exceed 20 ppm as a daily arithmetic average and 0.05 Kg/metric ton (0.10 lb./ton) of production as a daily arithmetic average. This subsection applies to those sources where construction was initiated prior to September 25, 1976.

(c) Smelt Dissolving Tanks. TRS emissions from each smelt dissolving tank shall not exceed 0.0165 gram/Kg BLS (0.033 lb./ton BLS) as a daily arithmetic average.

(d) Non-Condensables. Non-condensables from digesters, multiple-effect evaporators and contaminated condensate stripping shall be continuously treated to destroy TRS gases by thermal incineration in a lime kiln or incineration device capable of subjecting the non-condensables to a temperature of not less than 650° C. (1,200° F.) for not less than 0.3 second. An alternate device meeting the above requirements shall be available in the event adequate incineration in the primary device cannot be accomplished. Venting of TRS gases during changeover shall be minimized but in no case shall the time exceed one-hour;

(e) Other Sources:

(A) The total emission of TRS from other sources shall not exceed 0.078 Kg/metric ton (0.156 lb./ton) of production as a daily arithmetic average;

(B) Miscellaneous Sources and Practices. If it is determined that sewers, drains, and anaerobic lagoons significantly contribute to an odor problem, a program for control shall be required.

(2) Particulate Matter:

(a) Recovery Furnaces. The emissions of particulate matter from each recovery furnace stack shall not exceed:

(A) 2.0 kilograms per metric ton (4.0 pounds per ton) of production as a daily arithmetic average;

(B) 0.30 gram per dry standard cubic meter (0.13 grain per dry standard cubic foot) as a daily arithmetic average; and

(C) Thirty-five percent opacity for a period or periods aggregating more than 30minutes in any 180 consecutive minutes or more than 60 minutes in any 24 consecutive hours (excluding periods when the facility is not operating).

(b) Lime Kilns. The emissions of particulate matter from each lime kiln stack shall not exceed:

(A) 0.50 kilogram per metric ton (1.00 pound per ton) of production as a daily arithmetic average;

(B) 0.46 gram per dry standard cubic meter (0.20 grain per dry standard cubic foot) as a daily arithmetic average; and

(C) The visible emission limitations in section (4) of this rule.

(c) Smelt Dissolving Tanks. The emission of particulate matter from each smelt dissolving tank vent shall not exceed:

(A) A daily arithmetic average of 0.25 kilogram per metric ton (0.50 pound per ton) of production; and

(B) The visible emission limitations in section (4) of this rule.

(d) Replacement or Significant Upgrading of existing particulate pollution control equipment after July 1, 1988 shall result in more restrictive standards as follows:

(A) Recovery Furnaces:

(i) The emission of particulate matter from each affected recovery furnace stack shall not exceed 1.00 kilogram per metric ton (2.00 pounds per ton) of production as a daily arithmetic average; and

(ii) 0.10 gram per dry standard cubic meter (0.044 grain per dry standard cubic foot) as a daily arithmetic average.

(B) Lime Kilns:

(i) The emission of particulate matter from each affected lime kiln stack shall not exceed 0.25 kilogram per metric ton (0.50 pound per ton) of production as a daily arithmetic average; and

(ii) 0.15 gram per dry standard cubic meter (0.067 grain per dry standard cubic foot) as a daily arithmetic average when burning gaseous fossil fuel; or

(iii) 0.50 kilogram per metric ton (1.00 pound per ton) of production as a daily arithmetic average; and

(iv) 0.30 gram per dry standard cubic meter 0.13 grain per dry standard cubic foot) as a daily arithmetic average when burning liquid fossil fuel.

(C) Smelt Dissolving Tanks. The emissions of particulate matter from each smelt dissolving tank vent shall not exceed 0.15 kilogram per metric ton (0.30 pound per ton) of production as a daily arithmetic average.

(3) Sulfur Dioxide (SO2). Emissions of sulfur dioxide from each recovery furnace stack shall not exceed a three-hour arithmetic average of 300 ppm on a dry-gas basis except when burning fuel oil. The sulfur content of fuel oil used shall not exceed the sulfur content of residual and distillate oil established in OAR 340-228-0100 and 340-228-0110, respectively.

(4) All kraft mill sources with the exception of recovery furnaces shall not exceed an opacity equal to or greater than 20 percent for a period exceeding three minutes in any one hour.

(5) New Source Performance Standards. New or modified sources that commenced construction after September 24, 1976, are subject to each provision of this rule and the New Source Performance **Standards, 40 CFR 60** **subpart BB** as adopted under OAR 340-238-0060, whichever is more stringent.

**NOTE:** Except for OAR 340-234-0210(1), this rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77; DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0165; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0220**

**More Restrictive Emission Limits**

The Department may establish more restrictive emission limits than the numerical emission standards contained in OAR 340-234-0210 and maximum allowable daily mill site emission limits in kilograms or pounds per day for an individual mill upon a finding by the Department that:

(1) The individual mill is located or is proposed to be located in a special problem area or an area where ambient air standards are exceeded or are projected to be exceeded or where the emissions will have a significant air quality impact in an area where the standards are exceeded; or

(2) An odor or nuisance problem has been documented at any mill, in which case the TRS emission limits may be reduced below the regulatory limits; or the Department may require the mill to undertake an odor emission reduction study program; or

(3) Other rules which are more stringent apply.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77; DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0170; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0240**

**Monitoring**

(1) Total Reduced Sulfur (TRS). Each mill shall continuously monitor TRS in accordance with the following:

(a) The monitoring equipment shall determine compliance with the emission limits and reporting requirements established by OAR 340-234-0200 through 340-234-0270, and shall continuously sample and record concentrations of TRS;

(b) The sources monitored shall include, but are not limited to individual recovery furnaces, and lime kilns. All sources shall be monitored down-stream of their respective control equipment, in either the ductwork or the stack, in accordance with the Department Continuous Monitoring Manual;

(c) Unless otherwise authorized or required by permit, at least once per year, vents from other sources as required in OAR 340-234-0210(1)(e), Other Sources, shall be sampled to demonstrate the representativeness of the emission of TRS using EPA Method 16, 16A, 16B or continuous emission monitors. EPA methods shall consist of three separate consecutive runs of one-hour each in accordance with the Department Source Sampling Manual. Continuous emissions monitors shall be operated for three consecutive hours in accordance with the **Department Continuous Monitoring Manual**. All results shall be reported to the Department;

(d) Smelt dissolving tank vents shall be sampled for TRS quarterly except that testing may be semi-annual when the preceding six source tests were less than 0.0124 gram/Kg BLS (0.025 lb./ton BLS)using EPA Method 16, 16A, 16B or continuous emission monitors. EPA methods shall consist of three separate consecutive runs of one-hour each in accordance with the **Department Source Sampling Manual**.

(2) Particulate Matter:

(a) Each mill shall sample the recovery furnace(s), lime kiln(s) and smelt dissolving tank vent(s) for particulate emissions in accordance with the Department Source Sampling Manual;

(b) Each mill shall provide continuous monitoring of opacity of emissions discharged to the atmosphere from each recovery furnace stack in accordance with the **Department Continuous Monitoring Manual**.

(c) Recovery furnace particulate source tests shall be performed quarterly except that testing may be semi-annual when the preceding six source tests were less than 0.225 gram/dscm (0.097 grain/dscf) for furnaces subject to OAR 340-234-0210(2)(a) or 0.075 gram/dscm (0.033 grain/dscf) for furnaces subject to OAR 340-234-0210(2)(d)(A);

(d) Lime kiln source tests shall be performed semi-annually;

(e) Smelt dissolving tank vent source tests shall be performed quarterly except that testing may be semi-annual when the preceding six source tests were less than 0.187 kilogram per metric ton (0.375 pound per ton) of production.

(3) Sulfur Dioxide (SO2). Representative sulfur dioxide emissions from each recovery furnace shall be determined at least once each month by the average of three one-hour source tests in accordance with the Department Source Sampling Manual or from continuous emission monitors. If continuous emission monitors are used, the monitors shall be operated for three consecutive hours in accordance with the **Department** **Continuous Monitoring Manual**.

(4) Combined Monitoring. The Department may allow the monitoring for opacity of a combination of more than one emission stream if each individual emission stream has been demonstrated with the exception of opacity to be in compliance with all the emission limits of OAR 340-234-0210. The Department may establish more stringent emission limits for the combined emission stream.

(5) New Source Performance Standards Monitoring. New or modified sources that are subject to the New Source Performance Standards, 40 CFR Part 60, Subpart BB, shall conduct monitoring or source testing as required by Subpart BB. In addition, when it is more stringent than Subpart BB, the Department may require some or all of the relevant monitoring in this section.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77; DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0180; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0250**

**Reporting**

If required by the Department or by permit, data shall be reported by each mill for each calendar month by the last day of the subsequent calendar month as follows:

(1) Applicable daily average emissions of TRS gases expressed in parts per million of H2S on a dry gas basis with oxygen concentrations, if oxygen corrections are required, for each source included in the approved monitoring program.

(2) Daily average emissions of TRS gases in pounds of total reduced sulfur per equivalent ton of pulp processed, expressed as H2S, for each source included in the approved monitoring program.

(3) Maximum daily three-hour average emission of SO2 based on all samples collected from the recovery furnace(s), expressed as ppm, dry basis.

(4) All daily average opacities for each recovery furnace stack where transmissometers are utilized.

(5) All six-minute average opacities from each recovery furnace stack that exceeds 35 percent.

(6) Daily average kilograms of particulate per equivalent metric ton (pounds of particulate per equivalent ton) of pulp produced for each recovery furnace stack. Where transmissometers are not feasible, the mass emission rate shall be determined by alternative sampling approved by the Department.

(7) Unless otherwise approved in writing, all periods of non-condensible gas bypass shall be reported.

(8) Each kraft mill shall furnish, upon request of the Department, such other pertinent data as the Department may require to evaluate the mill's emission control program.

(9) Monitoring data reported shall reflect actual observed levels corrected for oxygen, if required, and analyzer calibration.

(10) Oxygen concentrations used to correct pollutant data shall reflect oxygen concentrations at the point of measurement of pollutants.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 132, f. & ef. 6-10-77; DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0185; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0270**

**Chronic Upset Conditions**

If the Department determines that an upset condition is chronic and correctable by installing new or modified process or control procedures or equipment, a program and schedule to effectively eliminate the deficiencies causing the upset conditions shall be submitted. Such reoccurring upset conditions causing emissions in excess of applicable limits may be subject to civil penalty or other appropriate action.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0205

**Neutral Sulfite Semi-Chemical (NSSC) Pulp Mills**

**340-234-0300**

**Applicability**

OAR 340-234-0300 through 340-234-0360 apply to existing and new neutral sulfite semi-chemical (NSSC) pulp mills.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

Stat. Auth.: ORS 468A  
Stats. Implemented: ORS 468 & ORS 468A  
Hist.: DEQ 14-1999, f. & cert. ef. 10-14-99

**340-234-0310**

**Emission Limitations**

(1) Emission of Total Reduced Sulfur (TRS): Spent Liquor Incinerator. The emissions of TRS from any spent liquor incinerator stack shall not exceed 10 ppm and 0.07 gram/kg BLS (0.14 lb/ton BLS) as a daily arithmetic average.

(2) Particulate Matter: Spent Liquor Incinerator. The emissions of particulate matter from any spent liquor incinerator stack shall not exceed:

(a) 3.6 grams/kg BLS (7.2 lbs/ton BLS) as a daily arithmetic average in accordance with the Department **Source Sampling Manual**; and

(b) An opacity equal to or greater than 35 percent for a period exceeding 3 minutes in any one hour, excluding periods when the facility is not operating.

(3) Sulfur Dioxide (S02):

(a) Spent Liquor Incinerator. The emissions of sulfur dioxide from each spent liquor incinerator stack shall not exceed a 3-hr arithmetic average of 10 ppm on a dry gas basis;

(b) Acid Absorption Tower. The emissions of sulfur dioxide from the acid absorption tower stack shall not exceed 20 ppm as a 3-hr arithmetic average on a dry gas basis.

(4) All NSSC sources, with the exception of spent liquor incinerators, shall not exhibit an opacity equal to or greater than 20 percent for a period exceeding three (3) minutes in any one hour.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0224

**340-234-0320**

**More Restrictive Emission Limits**

The Department may establish more restrictive emission limits than the numerical emission standards contained in OAR 340-234-0310 and maximum allowable daily mill site emission limits in kilograms or pounds per day, for an individual mill, upon a finding by the Department that:

(1) The individual mill is located or is proposed to be located in a special problem area or an area where ambient air standards are exceeded or are projected to be exceeded; or

(2) When an odor or nuisance problem has been documented at any mill the TRS emission limits may be reduced below the regulatory limits; or

(3) Other rules which are more stringent apply.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0226

**340-234-0330**

**Plans and Specifications**

Prior to construction of new neutral sulfite semi-chemical (NSSC) pulp mills or modification of facilities affecting emissions at existing NSSC mills, complete and detailed engineering plans and specifications for air pollution control devices and facilities and such data as may be required to evaluate projected emissions and potential effects on air quality shall be submitted to and approved by the Department. All construction shall be in accordance with plans as approved in writing by the Department.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0228

**340-234-0340**

**Monitoring**

(1) General:

(a) The details of the monitoring program for each mill shall be submitted to and approved by the Department. This submittal shall include diagrams and descriptions of all monitoring systems, monitoring frequencies, calibration schedules, descriptions of all sampling sites, data reporting formats and duration of maintenance of all data and reports. Any changes that are subsequently made in the approved monitoring program shall be submitted in writing to the Department for review and approved in writing prior to change;

(b) All records associated with the approved monitoring program including, but not limited to, original data sheets, charts, calculations, calibration data, production records and final reports shall be maintained for a period of at least two calendar years and shall be furnished to the Department upon request.

(2)(a) Total Reduced Sulfur (TRS). Each mill shall continuously monitor the spent liquor incinerator for TRS emissions using: continuous monitoring equipment, except where a vibration problem, which was in existence on March 26, 1989, exists and continuous monitoring equipment is not practical or economically feasible; in which case, upon documentation of the above condition, the spent liquor incinerator shall be sampled for TRS emissions using the reference method and the analytical method (EPA Method 16, 16A, or 16B) as outlined in the Department **Source Sampling Manual**;

(b) Spent liquor incinerator TRS source tests shall be performed quarterly except that testing may be semi-annual when the preceding six (6) source tests were less than 7.5 ppm;

(c) Flow rate measurements used to determine TRS mass emission rates shall be corrected for cyclonic flow, where applicable.

(3)(a) Particulate Matter. Each mill shall sample the spent liquor incinerator for particulate emissions with:

(A) The sampling method; and

(B) The analytical method specified in the Department **Source Sampling Manual**.

(b) Spent liquor incinerator particulate source tests shall be performed quarterly except that testing may be semi-annual when the preceding six (6) source tests were less than 2.7 grams/kg BLS (5.4 lbs./ton BLS). All sampling data shall be corrected for cyclonic flow, where applicable;

(c) Each mill shall provide continuous monitoring of opacity of emissions discharged to the atmosphere from the spent liquor incinerator, and the acid plant in accordance with the Department **Continuous Monitoring Manual**; except that when continuous monitoring of opacity is not feasible due to excessive moisture then EPA Method 9 shall be used for the determination of opacity.

(4) Sulfur Dioxide (SO2). Representative sulfur dioxide emissions from spent liquor incinerators and from the acid absorption tower shall be determined at least once every six (6) months with:

(a) The sampling method; and

(b) The analytical method specified in the Department **Source Sampling Manual**.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0230

**340-234-0350**

**Reporting**

Unless otherwise authorized by permit, data shall be reported by each mill for each sampling period by the 15th day of the first month following the applicable sampling period as follows:

(1) Daily average emissions of TRS gases in kilograms of total reduced sulfur per metric ton (pounds of total reduced sulfur per ton) of black liquor solids expressed as H2S based on all samples collected in one sampling period from the spent liquor incinerator.

(2) Daily average emissions of particulate in kilograms per metric ton (pounds per ton) of black liquor solids based on all samples collected in one sampling period from the spent liquor incinerator.

(3) Daily average concentration of sulfur dioxide in ppm for each source included in the approved monitoring program based on all samples collected in any one sampling period.

(4) Daily average amount of virgin air-dried unbleached NSSC pulp produced expressed as air dried metric tons per day (air dried tons per day).

(5) Daily average amount of black liquor solids, dry weight, fired in the spent liquor incinerator during periods of operation.

(6) Upset conditions shall be reported in accordance with OAR 340-234-0360(3).

(7) Each mill shall furnish, upon request of the Department, such other pertinent data as the Department may require to evaluate the mills emission control program.

(8) The Department shall be notified at least 15 days in advance of all scheduled reference method testing including all scheduled changes.

(9) Data reported shall reflect actual observed levels.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0232

**340-234-0360**

**Upset Conditions**

(1) Each mill shall report abnormal mill operations to the Department including control and process equipment maintenance, or unexpected upsets that result in emissions in excess of the regulatory or air containment discharge permit limits within one hour, or when conditions prevent prompt notification, as soon as possible but no later than one hour after the start of the next working day. The mill shall also take immediate corrective action to reduce emission levels to regulatory or permit levels.

(2) Upsets shall be reported in writing with an accompanying report on measures taken or to be taken to correct the condition and prevent its reoccurrence within five working days of each incident.

(3) Each mill shall report the cumulative duration in hours each month of the upsets reported in section (1) of this rule and classified as to:

(a) Spent Liquor Incinerator:

(A) TRS;

(B) Particulate;

(C) SO2;

(D) Opacity.

(b) Acid Absorption Tower:

(A) SO2;

(B) Opacity.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040 with the exception of references to Total Reduced Sulfur.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468A.025  
Hist.: DEQ 2-1990, f. & cert. ef. 1-24-90; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0234

**Sulfite Pulp Mills**

**340-234-0400**

**Statement of Policy and Applicability**

(1) Policy. It is the policy of the Commission:

(a) To require, in accordance with a specific program and timetable for each operating mill, the highest and best practicable treatment and control of emissions from sulfite mills through the utilization of technically feasible equipment, devices, and procedures.

(b) To require the evaluation of improved and effective measuring techniques for sulfur oxides, total reduced sulfur, particulates, and other emissions from sulfite mills.

(c) To require effective measuring and reporting of emissions and reporting of other data pertinent to emissions. The Department will use these data in conjunction with ambient air data and observation of conditions in the surrounding area to develop and revise emission standards and air quality standards, and to determine compliance therewith.

(d) To encourage and assist the sulfite pulping industry to conduct a research and technological development program designed to progressively reduce sulfite mill emissions, in accordance with a definite program with specific objectives.

(e) To establish standards deemed to be technically feasible, reasonably attainable, and necessary for the attaining of satisfactory air quality with the intent of revising the standards as new information and better technology are developed.

(2) Applicability. OAR 340-234-0400 through 340-234-0430 apply to existing and new sulfite pulp mills.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468.020 & ORS 468A.025  
Hist.: DEQ 32, f. 11-23-71, ef. 12-15-71; DEQ 15-1980, f. & ef. 5-23-80; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0355

**340-234-0410**

**Minimum Emission Standards**

(1) Notwithstanding the specific emission limits set forth in this rule, the Department of Environmental Quality may, after notice and hearing, establish more restrictive emission limits and compliance schedules for mills located in recognized problem areas, for new mills, for mills expanding existing facilities, for mills installing substantial modifications of existing facilities which result in increased emissions; or for mills in areas where it is shown ambient air standards are exceeded.

(2) The total average daily emissions from a sulfite pulp mill shall not exceed 20 pounds of sulfur dioxide per ton of air dried unbleached pulp produced and in addition:

(a) The blow system emissions shall not exceed 0.2 pounds of sulfur dioxide per minute per ton of unbleached pulp (charged to digester) on a 15 minute average;

(b) Emissions from the recovery system, acid plant, and other sources shall not exceed 800 ppm of sulfur dioxide as an hourly average.

(3) Mills of less than 110 tons of air dried unbleached pulp per day may be exempted from the limitations of section (2) of this rule provided that a minimum of 80 percent collection efficiency for sulphur dioxide (SO2) is maintained.

(4) The total emission of particulate matter from the recovery furnace stacks shall not exceed four pounds per air dried ton of unbleached pulp produced.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468.020 & ORS 468A.025  
Hist.: DEQ 32, f. 11-23-71, ef. 12-15-71; DEQ 15-1980, f. & ef. 5-23-80; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0360

**340-234-0420**

**Monitoring and Reporting**

(1) Each mill shall maintain a Department approved detailed sampling and testing program.

(2) The monitoring equipment shall be capable of determining compliance with the emission limits established by OAR 340-234-0400 through 350-234-0430, and shall be capable of continual sampling and recording of concentrations of sulfur dioxide contaminants from the recovery system. Unless otherwise approved in writing, compliance shall be determined by EPA Method 6 which is contained in the Department **Source Sampling Manual**.

(3) Each mill shall sample the recovery system, blow system, and acid plant for sulfur dioxide emissions on a regularly scheduled basis.

(4) Each mill shall sample the recovery furnace stacks for particulate on a regularly scheduled basis. Unless otherwise approved in writing, compliance shall be determined by EPA Method 5 (front half only) which is contained in the Department **Source Sampling Manual**.

(5) Unless otherwise authorized, data shall be reported by each mill at the end of each calendar month as follows:

(a) Average daily emissions of sulfur dioxides expressed as pounds of sulfur dioxide per ton of pulp produced from the blow system, recovery system, and acid plant;

(b) The daily average and peak concentrations of sulfur dioxides expressed in pounds per hour and expressed in ppm of sulfur dioxide and the number of hours each day that the concentration exceeds 500 ppm;

(c) The average daily production of unbleached pulp and the maximum daily production.

(6) Each mill shall furnish upon request of the Department, such other pertinent data as the Department may require to evaluate the mill's emission control program. Unless otherwise prescribed, each mill shall report immediately to the Department abnormal mill operations which adversely affect the emission of air contaminants.

(7) All measurements shall be made in accordance with techniques approved by the Department.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the agency.]

Stat. Auth.: ORS 468 & 468A  
Stats. Implemented: ORS 468.020 & ORS 468A.025  
Hist.: DEQ 32, f. 11-23-71, ef. 12-15-71; DEQ 15-1980, f. & ef. 5-23-80; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0370

**340-234-0430**

**Exceptions**

OAR 340-234-0400 through 340-234-0430 do not apply to open burning or power boiler operations conducted at sulfite pulp mills unless such boilers are an integral part of the sulfite process or recovery system.

[**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468 & ORS 468A  
Stats. Implemented: ORS 468.020 & ORS 468A.025  
Hist.: DEQ 32, f. 11-23-71, ef. 12-15-71; DEQ 15-1980, f. & ef. 5-23-80; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0380

**Board Products Industries (Veneer, Plywood, Particleboard, Hardboard**

**340-234-0500**

**Applicability and General Provisions**

(1) OAR 340-234-0500 through 340-234-0530 establish minimum performance and emission standards for veneer, plywood, particleboard, and hardboard manufacturing operations.

(2) Emission limitations established herein are in addition to, and not in lieu of, general emission standards for visible emissions, fuel burning equipment, and refuse burning equipment, except as provided for in OAR 340-234-0510.

(3) Each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with OAR 340-234-0500 through 340-234-0530.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468 & 468A

Stats. Implemented: ORS 468A.025

Hist.: DEQ 26, f. 3-31-71, ef. 4-25-71; DEQ 132, f. & ef. 4-11-77; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0500; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0510**

**Veneer and Plywood Manufacturing Operations**

(1) Veneer Dryers:

(a) Consistent with OAR 340-234-0500(1) through(4), it is the object of this section to control air contaminant emissions, including, but not limited to, condensable hydrocarbons such that visible emissions from each veneer dryer are limited to a level which does not cause a characteristic "blue haze" to be observable;

(b) No person shall operate any veneer dryer such that visible air contaminants emitted from any dryer stack or emission point exceed:

(A) An average operating opacity of ten percent; and

(B) A maximum opacity of 20 percent.

(c) Particulate emissions from wood fired veneer dryers shall not exceed:

(A) 0.75 pounds per 1,000 square feet of veneer dried (3/8 inch basis) for units using fuel which has a moisture content by weight of 20 percent or less;

(B) 1.50 pounds per 1,000 square feet of veneer dried (3/8 inch basis) for units using fuel which has a moisture content by weight of greater than 20 percent;

(C) In addition to paragraphs(1)(c)(A) and(B) of this rule, 0.40 pounds per 1,000 pounds of steam generated in boilers which exhaust gases to the veneer dryer.

(d) Exhaust gases from fuel-burning equipment vented to the veneer dryer are exempt from OAR 340-228-0210;

(e) Each veneer dryer shall be maintained and operated at all times such that air contaminant generating processes and all contaminant control equipment shall be at full efficiency and effectiveness so that the emission of air contaminants are kept at the lowest practicable levels;

(f) No person shall willfully cause or permit the installation or use of any means, such as dilution, which, without resulting in a reduction in the total amount of air contaminants emitted, conceals an emission which would otherwise violate this rule;

(g) Where effective measures are not taken to minimize fugitive emissions, the Department may require that the equipment or structures in which processing, handling, and storage are done, be tightly closed, modified, or operated in such a way that air contaminants are minimized, controlled, or removed before discharge to the open air;

(h) The Department may require more restrictive emission limits than provided in subsections (1)(b) and(c) of this rule for an individual plant upon a finding by the Commission that the individual plant is located or is proposed to be located in a special problem area. The more restrictive emission limits for special problem areas may be established on the basis of allowable emissions expressed in opacity, pounds per hour, or total maximum daily emissions to the atmosphere, or a combination thereof.

(2) Other Emission Sources:

(a) The combined particulate emissions from veneer and plywood mill sources, including, but not limited to, sanding machines, saws, presses, barkers, hogs, chippers, and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities must not exceed a plant specific average hourly emission rate (lbs/hr) determined by multiplying the plant production capacity by one pound per 1,000 square feet. The plant production capacity is the maximum production in terms of 1,000 square feet on a 3/8 inch basis of finished product for a typical operating shift divided by the number of hours in the operating shift.

(b) Excepted from subsection (2)(a) of this rule are veneer dryers, fuel burning equipment, and refuse burning equipment.

(c) Compliance with the average hourly emission rate is determined by summing the emissions from the affected sources as determined by emission factor calculations or actual emissions data for a 24 hour period divided by 24.

(3) Monitoring and Reporting: The Department may require any veneer dryer facility to establish an effective program for monitoring the visible air contaminant emissions from each veneer dryer emission point. The program shall be subject to review and approval by the Department and shall consist of the following:

(a) A specified minimum frequency for performing visual opacity determinations on each veneer dryer emission point;

(b) All data obtained shall be recorded on copies of a "Veneer Dryer Visual Emissions Monitoring Form" which shall be provided by the Department of Environmental Quality or on an alternative form which is approved by the Department; and

(c) A specified period during which all records shall be maintained at the mill site for inspection by authorized representatives of the Department.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468A.025   
Hist.: DEQ 26, f. 3-31-71, ef. 4-25-71; DEQ 37, f. 2-15-72, ef. 3-1-72; DEQ 43(Temp), f. & ef. 5-5-72 thru 9-1-72; DEQ 48, f. 9-20-72, ef. 10-1-72; DEQ 52, f. 4-9-73, ef. 5-1-73; DEQ 83, f. 1-30-75, ef. 2-25-75; DEQ 132, f. & ef. 4-11-77; DEQ 7-1979, f. & ef. 4-20-79; DEQ 10-1985, f. & ef. 8-8-85; DEQ 22-1991, f. & cert. ef. 11-13-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0510; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0520**

**Particleboard Manufacturing Operations**

(1) Truck Dump and Storage Areas:

(a) Every person operating or intending to operate a particleboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent windblown particle emissions from these areas from being deposited upon property not under the ownership of said person;

(b) The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval for said storage:

(A) When authorized by the Department of Environment Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials;

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Any person who proposes to control windblown particulate emissions from truck dump storage areas other than by enclosure shall apply to the Department for written authorization to utilize alternative controls. The application shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

(2) Other Emission Sources:

(a) The combined particulate emissions from particleboard plant sources including, but not limited to, hogs, chippers, and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines, and materials handling systems must not exceed a plant specific average hourly emission rate (lbs/hr) determined by multiplying the plant production capacity by three pounds per 1000 square feet. The plant production capacity is the maximum production in terms of 1,000 square feet on a 3/4 inch basis of finished product for a typical operating shift divided by the number of hours in the operating shift.

(b) Excepted from subsection (2)(a) of this rule are truck dump and storage areas, fuel burning equipment, and refuse burning equipment.

(c) Compliance with the average hourly emission rate is determined by summing the emissions from the affected sources as determined by emission factor calculations or actual emissions data for a 24 hour period divided by 24.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468.020 & 468A.025   
Hist.: DEQ 26, f. 3-31-71, ef. 4-25-71; DEQ 130, f. & ef. 3-22-77; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 4-1995, f. & cert. ef. 2-17-95; DEQ 3-1996, f. & cert. ef. 1-29-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0320; DEQ 8-2007, f. & cert. ef. 11-8-07

**340-234-0530**

**Hardboard Manufacturing Operations**

(1) Truck Dump and Storage Areas:

(a) Every person operating or intending to operate a hardboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent windblown particle emissions from these areas from being deposited upon property not under the ownership of said person;

(b) The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval:

(A) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials;

(B) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

(c) Alternative Means of Control. Any person who desires to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall first apply to the Department for written authorization to utilize alternative controls. The application shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

(2) Other Emission Sources:

(a) For hardboard plants that did not exist during the baseline period, the combined particulate emissions from all emissions sources at the plant must not exceed a plant specific hourly average emission rate(lbs/hr) determined by multiplying the plant production capacity by one pound per 1,000 square feet of production. The plant production capacity is the maximum production in terms of 1000 square feet on a 1/8 inch finished basis for a typical operating shift divided by the number of hours in the operating shift.

(b) For hardboard plants that existed during the baseline period, the combined particulate emissions from the plant must not exceed the lesser of:

(A) A plant specific hourly average emission rate (lbs/hr) determined by multiplying the plant production capacity by two pounds per 1,000 square feet of production. The plant production capacity is the maximum production in terms of 1,000 square feet on a 1/8 inch finished basis for a typical operating shift divided by the number of hours in the operating shift, or

(B) The sum of the baseline emissions rate (lbs/hr) of the press/cooling vent and the lesser of:

(i) The baseline emissions rate (lbs/hr) from all sources at the plant, excluding the press/cooling vents; or

(ii) A plant specific hourly average emission rate (lbs/hr) determined by multiplying the plant production capacity by one pound per 1,000 square feet of production. The plant production capacity is the maximum production in terms of 1,000 square feet on a 1/8 inch finished basis for a typical operating shift divided by the number of hours in the operating shift.

(c) Excepted from subsections (a) and (b) of this section are truck dump and storage areas, fuel burning equipment, and refuse burning equipment.

(d) Compliance with the average hourly emission rate is determined by summing the emissions from the affected sources as determined by emission factor calculations or actual emissions data for a 24 hour period divided by 24.

(3) Emissions from Hardboard Tempering Ovens:

(a) No person shall operate any hardboard tempering oven unless all gases and vapors emitted from said oven are treated in a fume incinerator capable of raising the temperature of said gases and vapors to at least 1500° F. for 0.3 seconds or longer;

(b) Specific operating temperatures lower than 1500° F. may be approved by the Department upon application, provided that information is supplied to show that operation of said temperatures provides sufficient treatment to prevent odors from being perceived on property not under the ownership of the person operating the hardboard plant;

(c) In no case shall fume incinerators installed pursuant to this section be operated at temperatures less than 1000° F.;

(d) Any person who proposes to control emissions from hardboard tempering ovens by means other than fume incineration shall apply to the Department for written authorization to utilize alternative controls. The application shall describe in detail the plan proposed to control odorous emissions and indicate on a plot plan the location of the nearest property not under ownership of the applicant.

**NOTE:** This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

Stat. Auth.: ORS 468 & 468A   
Stats. Implemented: ORS 468.020 & 468A.025   
Hist.: DEQ 26, f. 3-31-71, ef. 4-25-71; DEQ 130, f. & ef. 3-22-77; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 4-1995, f. & cert. ef. 2-17-95; DEQ 3-1996, f. & cert. ef. 1-29-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0325; DEQ 8-2007, f. & cert. ef. 11-8-07