(92) "Hardboard" means a panel manufactured primarily from interfelted ligno-cellulosic fibers which are consolidated under heat and pressure in a hot press.

(93) "Hardwood plywood" means a plywood whose surface layer is a veneer of hardwood.

(94) "Heat sensitive material" means materials which cannot consistantly be exposed to temperatures greater than 95°C (203°F).

(94m) "Highway" has the meaning given it in s. 340.01 (22), Stats.

(95) "Highway project" means all or a portion of a proposed new or modified section of highway. Where an environmental impact document is to be prepared, the highway project may be taken to cover the same length of highway.

(95m) "Hour" means any 3,600 second period.

(96) "Hydrocarbon" means any organic compound containing carbon and hydrogen.

(96m) "Hydrogen gas stream" means a hydrogen stream formed in the chlor-alkali cell denuder.

(97) "Hydrophobic substrate" means any substrate that is resistant to or avoids wetting. This may include but is not limited to polyethylene, polypropylene, cellophane, metalized polyester, nylon, and mylar.

(98) "Implementation plan" means a plan adopted to implement, maintain, and enforce air standards within an air region or portion thereof.

(98m) "Inactive waste disposal site" means any disposal site or portion thereof where additional asbestos-containing waste material will not be deposited and where the surface is not disturbed by vehicular traffic.

(99) "Incinerator" means a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid, or gaseous combustible wastes are ignited and burned to produce solid and gaseous residues containing little or no combustible material.

(100) "Indirect source" means any stationary source which conveys motor vehicles or which attracts or may attract mobile source activity and thus indirectly causes the emission of any air contaminant. Such indirect sources include, but are not limited to highways and roads; parking facilities; retail, commercial and industrial facilities; recreation, amusement, sports and entertainment facilities; airports; office and government buildings; apartment and condominium buildings; and education facilities.

(100m) "Inprocess wastewater" means any water which, during manufacturing or processing, comes into direct contact with vinyl chloride or polyvinyl chloride or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product containing vinyl chloride or polyvinyl chloride but which has not been discharged to a wastewater treatment process or discharged untreated as wastewater.

(101) "Interior sheet base coating" means a coating applied by roller coater or spray to the interior side of sheets from which cans are formed to provide a protective lining between the can metal and product.

(102) "Interior body spray" means a coating sprayed on the interior of the can body to provide a protective film between the product and the can.

(103) "Intermittent vapor control system" means a vapor control system that employs an intermediate vapor holder to accumulate vapors displaced from tanks during filling. The control device destroys or removes the accumulated vapors only during automatically controlled cycles.

(103m) "In vinyl chloride service" means a piece of equipment that contains or contacts either a liquid that is at least 10% by weight vinyl chloride or a gas that is at least 10% by volume vinyl chloride.

(104) "Isokinetic sampling" means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the same point.

(105) "KPa" means kilo Pascals (1.0 kPa = 0.15 psia).

(106) "Kraft process" means any pulping process which uses an alkaline sulfide solution containing sodium hydroxide and sodium sulfide for a cooking liquor.

(106m) "Laboratory" means a facility or portion of a multi-use facility which does not produce a product for regular commercial use or sale and which is used primarily for scientific or technical experimentation or observation of matter for the purpose of research, development, quality assurance, analysis or teaching.

(107) "Large appliances" means doors, cases, lids, panels and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products. Not included are products of such weight that they are normally lifted only with powered lifting equipment or products which are intended to be permanently fastened in place.

(107m) "Latex resin" means a resin which is produced by a polymerization process which initiates from free radical catalyst sites and is sold undried.

(108) "Leaking component" means any component at a petroleum refinery which has a VOC concentration exceeding 10,000 ppm when tested in the manner approved by the department.

(109) "Light-duty trucks" means any motor vehicles rated at 3864 kilograms (8500 pounds) gross weight or less which are designed primarily for the purpose of transporting goods and materials, or derivatives of such vehicles.

(110) "Liquid-mounted seal" means a primary floating roof seal mounted in continuous contact with the liquid in a liquid organic compound storage tank between the tank wall and the floating roof around the internal circumference of the tank.

takes suction from a pressure below atmospheric and discharges against atmospheric pressure.

(203) "Vapor balance system" means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading tank and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.

(204) "Vapor collection system" means, for the purpose of liquid organic compound transfer operations, a vapor transport system which uses direct displacement by the liquid loaded to force vapors from the tank into a vapor control system or vapor holding tank.

(205) "Vapor-mounted seal" means any primary floating roof seal mounted so that there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

(206) "Vapor recovery or control system" means a system that gathers organic compound vapors released during the operation of any transfer, storage, or process equipment and processes the vapors so as to prevent their emission into the ambient air.

(206e) "Vinyl chloride purification" includes any part of the process of vinyl chloride production which follows vinyl chloride formation and in which finished vinyl chloride is produced.

(206j) "Vinyl chloride plant" includes any plant which produces vinyl chloride by any process.

(206o) "Vinyl chloride reactor" includes any vessel in which vinyl chloride is partially or totally polymerized into polyvinyl chloride.

(206t) "Vinyl chloride reactor opening loss" means the emission of vinyl chloride occurring when a reactor is vented to the atmosphere for any purpose other than an emergency relief discharge as defined in s. NR 154.19(6)(f)1.c. and (g)1.

(207) "Vinyl coating" means applying a decorative or protective topcoat or printing on vinyl coated fabric or vinyl sheets.

(207m) "Visible asbestos emissions" means any emissions which are visually detectable without the aid of instruments and which contain particulate asbestos material.

(208) "'Volatile organic compound' or 'VOC'" means any compound of carbon that has a vapor pressure greater than 0.1 millimeter of mercury (0.0019 psia) at standard conditions, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

(209) "Wastewater (oil-water) separator" means any device or piece of equipment which utilizes the difference in density between oil and water to remove oil and associated chemicals from water. This includes any device, such as a flocculation tank, clarifer, etc., which removes petroleum derived compounds from wastewater.

(209m) "Wastewater treatment process" includes any process which modifies characteristics such as biological or chemical oxygen demand,

total suspended solids, or pH, usually for the purpose of meeting effluent guidelines and standards but does not include any process the purpose of which is to remove vinyl chloride from water to meet requirements of s. NR 154.19(6).

(210) "Water based sprays" means release compounds, sprayed on the inside and outside of green tires, in which solids, water, and emulsifiers have been substituted for all organic solvents.

(211) "Waxy, heavy pour crude petroleum" means a crude petroleum with a pour point of 10°C (50°F) or higher as determined by the ASTM standard D97-66, "Test For Pour Point of Petroleum Oils."

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72, renum. (41) (a) 6 to be (41) (c); am. (41)(c) 3. and 4., Register, December, 1972, No. 204, eff. 1-1-73; r. and recr., Register, June, 1975, No. 234, eff. 7-1-75; renum. (3)(b) and (c) to be (3)(c) and (d), renum. (3)(a) 3. to be (3)(b) and am., am. (38) (intro.), Register, April, 1977, No. 256, eff. 5-1-77; r. and recr., Register, July, 1979, No. 283, eff. 8-1-79; am. Register, March, 1981, No. 303, eff. 4-1-81; cr. (118m) and (193m), Register, March, 1982, No. 315, eff. 4-1-82; cr. (94m), (118n), (159m) and (165m), Register, October, 1982, No. 322, eff. 11-1-82; cr. (intro.), (13m), (27m), (66m), (75m), (106m), (118s), (162m), (164g) and (164m), r. and recr. (118), Register, April, 1983, No. 328, eff. 5-1-83; cr. (68m), Register, July, 1983, No. 331, eff. 8-1-83; cr. (38m) and (178m) and am. (63), Register, November, 1983, No. 335, eff. 12-1-83; cr. (1g), (1r), (12m), (19m), (28e), (28j), (28o), (28t), (28y), (35m), (38s), (38w), (50m), (52m), (59g), (59r), (61m), (64m), (67g), (67r), (69m), (70g), (70r), (71m), (72m), (79m), (81m), (89m), (96m), (98m), (100m), (103m), (107m), (114m), (116m), (116e), (116j), (116o), (116t), (116y), (147m), (148m), (156g), (156r), (162s), (164m), (165q), (165w), (169m), (175e), (175m), (175s), (182e), (182m), (182s), (184e), (184m), (184s), (199m), (206e), (206j), (206o), (206t), (207m), and (209m), Register January, 1984, No. 337, eff. 2-1-84; cr. (95m), Register, September, 1984, No. 345, eff. 10-1-84.

NR 154.02 Applicability, delayed compliance, variances. (1) APPLICABILITY. The provisions of this chapter govern the release of air contaminants to the ambient air and the regulation of air contaminant sources by the department.

(2) DELAYED COMPLIANCE ORDERS. The department may, by order issued under s. 144.35 (1) (b), [144.423 (1) (b)] Stats., authorize a source not in compliance with an emission limitation prescribed in this chapter to achieve compliance as expeditiously as practicable but not later than 3 years after such requirement became applicable. The department shall hold a public hearing in accordance with its rules prior to authorizing any period of delayed compliance which exceeds 30 days in duration. No such order shall be issued unless:

(a) The cause of the violation was a malfunction, equipment failure, act of God, or some other condition beyond the entity's control, when using all prudent planning;

(b) The air contaminant source is located so that it will not delay attainment or affect maintenance of an ambient air quality standard at any point beyond the property line of the entity;

(c) Good faith efforts have been made to comply with this chapter;

(d) If the violation was caused by a malfunction or equipment failure, any plan required to be prepared by s. NR 154.06 (9) was complied with;

(e) The air contaminant for which a deferral is sought is not a hazardous pollutant for which an emission standard has been established by the administrator of the U.S. environmental protection agency.

(f) The conditions listed in s. NR 154.09 (1), if applicable, are met;

(g) The order contains:

1. An express provision whereby the order recipient consents to its issuance;

2. A requirement that the order recipient employ reasonable emission monitoring techniques to assess compliance with any interim requirements imposed by the order;

3. A requirement for submittal of reports showing whether any interim requirements, increments of progress, and final compliance have been achieved;

4. A provision prohibiting the reduction of employe wages where supplemental, intermittent or other dispersion-dependent control methods are to be used;

5. In the case of a major stationary source, a notice that it may be required to pay administrative noncompliance penalties for failure to comply with the order and that no order issued under this subsection shall be effective until it is approved by the administrator of the U.S. environmental protection agency or designee.

(h) All reasonably available alternative operating procedures and interim control measures to minimize emissions shall be utilized by the air contaminant source during the period of delayed compliance.

(3) RACT VARIANCES. (a) The department may grant source-specific revisions to the state implementation plan setting alternate compliance schedules or alternate emission limitations, or both, where compliance with general RACT requirements of this chapter are shown to be technologically or economically infeasible, provided that:

1. The revision will not delay attainment or prevent maintenance of any ambient air quality standard, as determined by methods acceptable to the department.

2. Construction or modification of the air contaminant source for which a revision is requested was commenced on or before October 1, 1979.

3. The owner or operator of the air contaminant source for which a revision is requested demonstrates that all direct or portable sources owned or operated in the state by such person are in compliance with all applicable requirements of this chapter or are on a schedule for compliance with such requirements.

4. The owner or operator submits to the department information concerning the conditions or special circumstances which demonstrates, to the department's satisfaction, that the applicable general RACT re-

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3. Any paper mill in Green Bay located between milepoints 3.3 and 4.0 on the Fox river: The total emissions of sulfur dioxide from all steam generating boilers may not exceed 28,000 tons of sulfur dioxide per calendar year.

4. Any paper mill in DePere located between milepoints 7.0 and 7.4 on the Fox river: The total emissions of sulfur dioxide from all steam generating boilers may not exceed 3,000 tons of sulfur dioxide per calendar year.

5. Any neutral sulfite semichemical pulp and paper mill: The total emissions of sulfur dioxide from all steam generating boilers may not exceed 4,300 tons of sulfur dioxide per calendar year.

6. Any calcium based sulfite pulp and paper mill: The total emissions of sulfur dioxide from all steam generating boilers may not exceed 3,780 tons of sulfur dioxide per calendar year.

7. Any paper mill in Green Bay located between milepoints 0.4 and 0.7 on the East river: The total emissions of sulfur dioxide from all steam generating boilers may not exceed 1,100 tons of sulfur dioxide per calendar year.

(c) When a source is subject to the emission limitations of par. (a), the owner or operator shall meet the following deadlines in achieving compliance with those emission limitations:

1. Submit plans for achieving compliance within 6 months after February 1, 1984.

2. Award any necessary contracts within 9 months after February 1, 1984.

3. Where physical alteration of the source is necessary to achieve compliance, commence construction within 12 months after February 1, 1984 and complete construction on or before November 9, 1985.

4. Where only fuel modification or switching is necessary to achieve compliance, commence operation using new fuel on or before August 9, 1985.

5. Achieve final compliance with the applicable emission limitations in par. (a) and so certify to the department on or before November 9, 1985.

(d) For purposes of determining compliance with the emission limitations of pars. (a) and (b), the owner or operator of a source described in par. (a) or (b) shall outline the specific methods for demonstrating compliance with the emission limitations to the satisfaction of the department in the compliance plans submitted under par. (c)1. The compliance demonstrations shall include, but not be limited to, the following requirements:

1. Any facility which has solid fossil fuel fired or spent sulfite liquor fired steam generating boilers with a combined rated heat input capacity of greater than 500 million BTU per hour shall install, calibrate, maintain and operate a continuous emission monitor, utilizing equipment and procedures reviewed and approved by the department.

2. Any facility which has solid fossil fuel fired steam generating boilers with a combined rated heat input capacity of less than 500 million BTU per hour shall collect and analyze a daily, as-fired sample of fuel used, utilizing equipment and procedures reviewed and approved by the department.

3. Any facility which has liquid fossil fuel fired steam generating boilers shall collect and analyze a daily, as-fired sample of fuel used, utilizing equipment and procedures reviewed and approved by the department.

4. Emissions from all other sources shall be determined by annual stack emissions testing or by such other appropriate methods reviewed and approved by the department.

5. Quarterly reports in duplicate shall be submitted to the department's Lake Michigan District Headquarters, P.O. Box 10448, Green Bay, Wisconsin 54307-0448. The quarterly reports shall include, but not be limited to, excess emission reports for facilities with continuous emission monitors, amounts of fuel used, and fuel sampling and analysis reports for compliance under subds. 2 and 3.

6. Each facility shall maintain complete records of emissions data and calculations used to verify emissions data at their premises and shall make such records available for inspection upon request by authorized representatives of the department during regular business hours.

(e) For purposes of determining the applicability of the boiler sizes and source capacities outlined in pars. (a) and (d), the capacity of a source and the size of a boiler of a described source shall be determined as of May 31, 1983.

(8) PESHTIGO RACT SULFUR LIMITATIONS. (a) No person may cause, allow or permit sulfur dioxide to be emitted to the ambient air within the corporate boundary of the city of Peshtigo, Marinette county, from any pulp, paper, or pulp and paper mill on which construction or modification was last commenced prior to October 1, 1984 in amounts greater than:

1. From any liquid fossil fuel and natural gas fired steam generating boiler,

a. 0.626 pounds per million BTU heat input if any liquid fossil fuel and natural gas fired steam generating boiler at the mill emits from a point 54 feet above ground, or

b. 2.301 pounds per million BTU heat input if all liquid fossil fuel and natural gas fired steam generating boilers at the mill emit from a point between 160 and 232 feet above ground, or

c. 2.930 pounds per million BTU heat input if all liquid fossil fuel and natural gas fired steam generating boilers at the mill emit from a point 232 feet or more above ground.

2. From any liquid fossil fuel, natural gas and wood refuse fired steam generating boiler,

a. 0.626 pounds per million BTU heat input if any liquid fossil fuel and natural gas fired steam generating boiler at the mill emits from a point 54 feet above ground, or

b. 0.522 pounds per million BTU heat input if all liquid fossil fuel and natural gas fired steam generating boilers at the mill emit from a point between 160 and 232 feet above ground, or

c. 2.930 pounds per million BTU heat input if all liquid fossil fuel and natural gas fired steam generating boilers at the mill emit from a point 232 feet or more above ground.

3. From any spent sulfite liquor incinerator and evaporation plant emitting from a point 197 feet or more above ground, 1,682.00 pounds per hour and 35,184.00 pounds in any 24 hours.

4. From all pulp digesters emitting from a point 100 feet or more above ground, 300.00 pounds in any 3 hours and 1,365.00 pounds in any 24 hours.

5. From any air contact evaporator emitting from a point 35 feet or more above ground, 33.02 pounds per hour and 686.88 pounds in any 24 hours.

6. From any acid plant emitting from a point 99 feet or more above ground, 0.543 pounds per hour.

7. From all other sources, a total of 6.82 pounds per hour.

(b) When a source is subject to par.(a), the owner or operator shall meet the following deadlines in achieving compliance with the emission limitations of that paragraph:

1. Achieve compliance with par. (a) 1., 2., 3., 5., 6., and 7. by October 1, 1984 and so certify to the department before November 1, 1984.

2. Submit plans for achieving compliance with the emission limitations of par. (a) 4. before April 1, 1985.

3. Award contracts for physical alterations necessary to achieve compliance with par. (a) 4. before May 1, 1985.

4. Commence construction necessary to achieve compliance with par. (a) 4. before August 1, 1985.

5. Complete construction necessary to achieve compliance with par. (a) 4. before November 1, 1986.

6. Achieve compliance with the emission limitations of par. (a) 4. and so certify to the department before November 20, 1986.

(c) The owner or operator of a source subject to par. (a) shall prepare and maintain a compliance demonstration plan to assure continuous compliance with the emission limitations of that paragraph.

1. The plan shall be in writing, updated as needed, and shall include but need not be limited to:

a. The name of the individual responsible for compliance demonstration activities at the source.

b. A description of the stacks, vents, raw materials, fuels and other items or parameters which will be tested, monitored, sampled, analyzed or measured to determine that the source is in compliance with par. (a).

c. A description of the testing methods, monitoring techniques, sampling and analysis methods and measurements which will be used, including the types of equipment to be used and the frequency of testing, monitoring, sampling, analysis or measurement.

d. A description of the records which will be created and maintained, their retention time, and the periodic reports which will be submitted to the department to demonstrate that the emission limitations of par. (a) are being met.

e. A procedure for detecting and reporting upsets, malfunctions and other events which may result in the violation of an emission limitation or which may affect the quantity or quality of complaince demonstration data.

f. Other relevant information reasonably needed to demonstrate continuous compliance with the emission limitations of par. (a).

2. The plan shall be filed with the department before November 1, 1984. Subsequent revisions to the plan shall be filed within 10 days of their completion.

3. The department may order any owner or operator of a source subject to par. (a) to submit the plan required by this paragraph for review and approval. The department may amend the plan if deemed necessary to assure that continuous compliance is adequately demonstrated and to recognize changes in the economic or technological feasibility of different compliance demonstration methods.

4. No owner or operator may fail to carry out the plan required under this paragraph or as amended by the department under subd. 3.

5. Nothing in this paragraph precludes the department from exercising its authority to require reporting or recordkeeping in addition to that required by this paragraph or exempts the owner or operator of a source subject to par. (a) from any other requirements relating to proof of compliance.

(d) No owner or operator of a source subject to par. (a) may cause, allow or permit sulfur dioxide to be emitted from emission points lower than those which existed at the source on December 1, 1983, unless written permission has been granted by the department.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72;cr. (3), Register, June, 1975, No. 234, eff. 7-1-75;cr. (2) (c), Register, April, 1976, No. 244, eff. 5-1-76; cr. (5), Register, November, 1979, No. 287, eff. 12-1-79; cr. (4), Register, January, 1980, No. 289, eff. 2-1-80; am. (4) (a), Register, December, 1982, No. 324, eff. 1-1-83; cr. (6), Register, November, 1983, No. 335, eff. 12-1-83; cr. (7), Register, January, 1984, No. 337, eff. 2-1-84; cr. (8), Register, September, 1984, No. 345, eff. 10-1-84; correction in (7) (d) 5. made under s. 13.93 (2m) (b) 6, Stats., correction in (8) (a) (intro.), (b) 1. and 2. and (c) 2., made under s. 13.93 (2m) (b) 14, Stats., Register, September, 1984, No. 345.

NR 154.13 Control of organic compound emissions. (1) GENERAL LIMITATIONS. (a) No person shall cause, allow or permit organic compound emissions into the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.

(b) No person shall cause, allow or permit organic compounds to be used or handled without using good operating practices and taking reasonable precautions to prevent the spillage, escape or emission of organic

compounds, solvents or mixtures. Such precautions shall include, but are not limited to:

1. Use of caution to prevent spillage or leakage when filling tanks, trucks or trailers.

2. Use of caution when filling automobile tanks to prevent spillage.

(c) *Disposal of VOC wastes.* 1. Effective August 1, 1979, no person shall cause, allow, or permit the disposal of more than 5.7 liters (1.5 gallons) of any liquid VOC waste, or of any liquid, semisolid or solid waste materials containing more than 5.7 liters (1.5 gallons) of any VOC, in any one day from a facility in a manner that would permit their evaporation into the ambient air during the ozone season. This includes, but is not limited to, the disposal of VOC which must be removed from VOC control devices so as to maintain the control devices at their required operating efficiency.

2. Disposal during the ozone season shall be by methods approved by the department, such as incineration, recovery for reuse, or transfer in closed containers to an acceptable disposal facility, such that the quantity of VOC which evaporates into the ambient air does not exceed 15% (by weight) or 5.7 liters (1.5 gallons) in any one day, whichever is larger.

(2) STORAGE OF ORGANIC COMPOUNDS. (a) *Storage of petroleum liquids.* 1. Applicability. a. The storage, monitoring and maintenance requirements of subds. 2., 3. and 4. apply to all storage vessels for petroleum liquids of more than 151,412 liter (40,000 gallon) capacity on which construction or modification is commenced after July 1, 1975, with the exception of:

1) Storage vessels being used for number 2 through number 6 fuel oils as specified in ASTM-D-396-73, gas turbine fuel oils numbers 2-GT through 4-GT as specified in ASTM-D-2880-71, or diesel fuel oils numbers 2-D and 4-D as specified in ASTM-D975-73.

Note: See American Society for Testing and Materials, Part 17, 1973. Copies of applicable standards from Part 17; Petroleum Products - Fuels, Solvents, Burner Fuel Oils, Lubricating Oils, Cutting Oils, Lubricating Greases, Hydraulic Fluids; are available for inspection at the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, and may be obtained for personal use from ASTM, 1916 Race Street, Philadelphia, PA 19103.

2) Storage vessels for the crude petroleum or condensate stored, processed or treated at a drilling and production facility outside a standard metropolitan statistical area prior to custody transfer.

3) Pressure vessels which are designed to operate at pressures in excess of 104 kPa (15 psig) without emissions except under emergency conditions.

4) Subsurface caverns or porous rock reservoirs.

5) Underground tanks if the total volume of petroleum liquids added to and taken from a tank annually does not exceed twice the volume of the tank.

b. Effective July 1, 1980, the maintenance requirements of subd. 4. apply to all storage vessels for petroleum liquids of more than 7,571 liter (2,000 gallon) capacity.

c. Effective August 1, 1979, subd. 5. applies, subject to the provisions of sub. (12), to all fixed roof storage vessels with capacities greater than 151,412 liters (40,000 gallons) with the exception of those having capacities less than 1,600,000 liters (416,000 gallons) used to store crude petroleum and condensate prior to custody transfer.

d. Effective April 1, 1981, subd. 6. applies, subject to the provisions of sub. (12) (d) or (e), to all storage vessels equipped with external floating roofs having capacities greater than 151,412 liters (40,000 gallons) with the exception of:

1) Storage vessels having capacities less than 1,500,000 liters (396,270 gallons) used to store crude petroleum and condensate prior to custody transfer.

2) Storage vessels used to store waxy, heavy pour crude petroleum.

3) Storage vessels used solely for petroleum liquids with a true vapor pressure of less than 10.5 kPa (1.52 psia).

4) Storage vessels used solely for petroleum liquids with a true vapor pressure of less than 27.6 kPa (4.0 psia), and which are of welded construction, and presently possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid filled type seal, or equally effective alternative control, approved by the department.

5) Storage vessels of welded construction, equipped with metallic-type shoe primary seal which has a secondary seal from the top of the shoe seal to the tank wall.

e. Effective April 1, 1981, subd. 7. applies to all storage vessels with capacities greater than 151,412 liters (40,000 gallons) equipped with external floating roofs without secondary seals or their approved equivalent.

2. Storage requirements. The owner or operator of any storage vessel to which this subdivision applies shall store petroleum liquids as follows:

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