

Chapter NR 464

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM THE PULP AND PAPER INDUSTRY

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NR 464.01 Applicability; purpose. c1d APPLICABILITY. cad The provisions of this chapter apply to the owner or operator of processes that produce pulp, paper or paperboard; that are located at a plant site that is a major source as defined in s. NR 460.02 c24d and that use the any of following processes and materials:

1. Kraft, soda, sulfite or semi-chemical pulping processes using wood.
2. Mechanical pulping processes using wood.
3. Any process using secondary or non-wood fibers.

cbd The affected source to which the existing source provisions of this chapter apply is as follows:

1. For the processes specified in par. cad 1., the affected source is the total of all HAP emission points in the pulping and bleaching systems.
2. For the processes specified in par. cad 2. or 3., the affected source is the total of all HAP emission points in the bleaching system.

ccd The new source provisions of this chapter apply to the total of all HAP emission points at new or existing sources as follows:

1. Each affected source defined in par. cbd 1. that commences construction or reconstruction after December 17, 1993.
2. Each pulping system or bleaching system for the processes specified in par. cad 1. that commences construction or reconstruction after December 17, 1993.
3. Each additional pulping or bleaching line at the processes specified in par. cad 1. that commences construction after December 17, 1993.
4. Each affected source defined in par. cbd 2. that commences construction or reconstruction after March 8, 1996.
5. Each additional bleaching line at the processes specified in par. cad 2. or 3. that commences construction after March 8, 1996.

cdd Each existing source shall achieve compliance no later than April 16, 2001, except as provided in par. ced and subs. 1. and 2.:

1. Each kraft pulping system shall achieve compliance with the pulping system provisions of s. NR 464.03 for the equipment listed in s. NR 464.03 c1d cad 2. to 5. as expeditiously as practicable, but in no event later than April 17, 2006, and the owners and operators shall establish dates, update dates and report the dates for the milestones specified in s. NR 464.11 c2d.
2. Each dissolving-grade bleaching system at either kraft or sulfite pulping mills shall achieve compliance with the bleach plant provisions of s. NR 464.05 as expeditiously as practicable, but in no event later than 3 years after the promulgation of the re-

vised effluent limitation guidelines and standards under 40 CFR 430.14 to 430.17 and 430.44 to 430.47.

ced Each bleaching system complying with the voluntary advanced technology incentives program for effluent limitation guidelines in 40 CFR 430.24 shall, for the effluent limitation guidelines and standards in 40 CFR 430.24, comply with the bleach plant provisions of 40 CFR 63.445 as expeditiously as practicable, but in no event later than April 16, 2001, or shall comply with all of the following:

1. The owner or operator of a bleaching system shall comply with the bleach plant provisions of s. NR 464.05 as expeditiously as practicable, but in no event later than April 15, 2004.

2. The owner or operator of a bleaching system shall comply with the requirements specified in either of the following:

- a. Not increase the application rate of chlorine or hypochlorite, in kg of bleaching agent per megagram of ODP, in the bleaching system above the average daily rates used over the 3 months prior June 15, 1998, until the requirements of subd. 1. are met, and record application rates as specified in s. NR 464.10 c3d.

- b. Comply with enforceable effluent limitations guidelines for 2,3,7,8-tetrachloro-dibenzo-p-dioxin and adsorbable organic halides at least as stringent as the baseline best available technology economically achievable levels set in 40 CFR 430.24cad c1d as expeditiously as possible, but in no event later than April 16, 2001.

3. Owners and operators shall establish dates, update dates and report the dates for the milestones specified in s. NR 464.11 c2d.

cfd Each new source, specified as the total of all HAP emission points for the sources specified in par. ccd, shall achieve compliance upon startup or by June 15, 1998, whichever is later, as provided in s. NR 460.05 c2d.

cgd Each owner or operator of an affected source with affected process equipment shared by more than one type of pulping process shall comply with the applicable requirement in this chapter that achieves the maximum degree of reduction in HAP emissions.

chd Each owner or operator of an affected source specified in pars. cad to ccd shall comply with the requirements of ch. NR 460, according to the applicability of ch. NR 460 to the sources, as indicated in Appendix S of ch. NR 460.

cid All references to 40 CFR part 63 and 40 CFR part 430 in this chapter mean those parts of the code of federal regulations as in effect on April 1, 2002, except that in the case of CFR provisions incorporated by reference in ch. NR 484, if a more recent date is specified in the applicable section of ch. NR 484, that date shall apply.

Note: Compliance dates are federally enforceable under 40 CFR 63.440 prior to the effective date of this section.

c2d PURPOSE. This chapter is adopted under ss. 285.27 c2d and 285.65, Stats., to establish emission standards for hazardous air pollutants from the pulp and paper industry.

Note: This chapter is based on the federal regulations contained in 40 CFR part 63 subpart S, created April 15, 1998, as last revised on December 22, 2000.

History: CR 00-175; cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.02 Definitions. For terms not defined in this section, the definitions contained in chs. NR 400 and 460 apply to the terms used in this chapter, with definitions in ch. NR 460 taking priority over definitions in ch. NR 400. In addition, the definitions in this section apply to the terms used in this chapter. If this section defines a term which is also defined in ch. NR 400 or 460, the definition in this section applies in this chapter. In this chapter:

c1d XAcid condensate storage tankY means any storage tank containing cooking acid following the sulfur dioxide gas fortification process.

c2d XBlack liquorY means spent cooking liquor that has been separated from the pulp produced by the kraft, soda or semi-chemical pulping process.

c3d XBleachingY means brightening of pulp by the addition of oxidizing chemicals or reducing chemicals.

c4d XBleaching lineY means a group of bleaching stages arranged in series such that bleaching of the pulp progresses as the pulp moves from one stage to the next.

c5d XBleaching stageY means all process equipment associated with a discrete step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal cfiltrated tanks, vacuum pumps, and any other equipment serving the same function as those previously listed.

c6d XBleaching systemY means all process equipment after high-density pulp storage prior to the first application of oxidizing chemicals or reducing chemicals following the pulping system, up to and including the final bleaching stage.

c7d XBoilerY means any enclosed combustion device that extracts useful energy in the form of steam. A boiler is not considered a thermal oxidizer.

c8d XChip steamerY means a vessel used for the purpose of preheating or pretreating wood chips prior to the digester, using flash steam from the digester or live steam.

c9d XClosed-vent systemY means a system that is not open to the atmosphere and is composed of piping, ductwork, connections and, if necessary, flow-inducing devices that transport gas or vapor from an emission point to a control device.

c10d XCombustion deviceY means an individual unit of equipment, including but not limited to, a thermal oxidizer, lime kiln, recovery furnace, process heater or boiler, used for the thermal oxidation of organic hazardous air pollutant vapors.

c11d XDayY means any 24 hour period corresponding to either midnight to midnight or to the actual 24 hour production day used by a specific facility.

c12d XDecker systemY means all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to high-density pulp storage. The decker system includes decker vents, filtrate tanks, associated vacuum pumps, and any other equipment serving the same function as those previously listed.

c13d XDigester systemY means each continuous digester or each batch digester used for the chemical treatment of wood or non-wood fibers. The digester system equipment includes associ-

ated flash tanks, blow tanks, chip steamers not using live steam, blow heat recovery accumulators, relief gas condensers, prehydrolysis units preceding the pulp washing system, and any other equipment serving the same function as those previously listed. The digester system includes any of the liquid streams or condensates associated with batch or continuous digester relief, blow or flash steam processes.

c14d XEmission pointY means any part of a stationary source that emits hazardous air pollutants regulated under this chapter, including emissions from individual process vents, stacks, open pieces of process equipment, equipment leaks, wastewater and condensate collection and treatment system units, and those emissions that could reasonably be conveyed through a stack, chimney or duct where such emissions first reach the environment.

c15d XEvaporator systemY means all equipment associated with increasing the solids content or concentrating spent cooking liquor from the pulp washing system including pre-evaporators, multi-effect evaporators, concentrators and vacuum systems, as well as associated condensers, hotwells and condensate streams, and any other equipment serving the same function as those previously listed.

c16d XFlow indicatorY means any device that indicates gas or liquid flow in an enclosed system.

c17d XHigh volume, low concentration collection systemY or XHVLC collection systemY means the gas collection and transport system used to convey gases from the HVLC system to a control device.

c18d XHigh volume, low concentration systemY or XHVLC systemY means the collection of equipment including the pulp washing, knotter, screen, decker and oxygen delignification systems, weak liquor storage tanks and any other equipment serving the same function as those previously listed.

c19d XKnotter systemY means equipment where knots, oversized material or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system. The knotter system equipment includes the knotter, knot drainer tanks, ancillary tanks and any other equipment serving the same function as those previously listed.

c20d XKraft pulpingY means a chemical pulping process that uses a mixture of sodium hydroxide and sodium sulfide as the cooking liquor.

c21d XLime kilnY means an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide.

c22d XLow volume, high concentration collection systemY or XLVHC collection systemY means the gas collection and transport system used to convey gases from the LVHC system to a control device.

c23d XLow volume, high concentration systemY or XLVHC systemY means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems and any other equipment serving the same function as those previously listed.

c24d XMechanical pulpingY means a pulping process that only uses mechanical and thermo-mechanical processes to reduce wood to a fibrous mass. The mechanical pulping processes include, but are not limited to, stone groundwood, pressurized groundwood, refiner mechanical, thermal refiner mechanical, thermo-mechanical and tandem thermo-mechanical.

c25d XNon-wood pulpingY means the production of pulp from fiber sources other than trees. The non-wood fiber sources

include, but are not limited to, bagasse, cereal straw, cotton, flax straw, hemp, jute, kenaf and leaf fibers.

c26d XOven-dried pulpY or XODPY means a pulp sample at zero percent moisture content by weight.

cad Pulp samples for applicability or compliance determinations for both the pulping and bleaching systems shall be unbleached pulp.

cbd For purposes of complying with mass emission limits in this chapter, megagram of ODP shall be measured to represent the amount of pulp entering and processed by the equipment system under the specified mass limit.

ccd For equipment that does not process pulp, megagram of ODP shall be measured to represent the amount of pulp that was processed to produce the gas and liquid streams.

c27d XOxygen delignification systemY means the equipment that uses oxygen to remove lignin from pulp after high-density stock storage and prior to the bleaching system. The oxygen delignification system equipment includes the blow tank, washers, filtrate tanks, any interstage pulp storage tanks and any other equipment serving the same function as those previously listed.

c28d XPrimary fuelY means the fuel that provides the principal heat input to the combustion device. To be considered primary, the fuel must be able to sustain operation of the combustion device without the addition of other fuels.

c29d XProcess wastewater treatment systemY means a collection of equipment, a process or a specific technique that removes or destroys the HAPs in a process wastewater stream. Examples include, but are not limited to, a steam stripping unit, wastewater thermal oxidizer or biological treatment unit.

c30d XPulp washing systemY means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system or paper machine system at unbleached mills. The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests or pulp storage tanks following the last stage of pulp washing.

c31d XPulping lineY means a group of equipment arranged in series such that the wood chips are digested and the resulting pulp progresses through a sequence of steps that may include knotting, refining, washing, thickening, blending, storing, oxygen delignification and any other equipment serving the same function as those previously listed.

c32d XPulping process condensatesY means any HAP-containing liquid that results from contact of water with organic compounds in the pulping process. Examples of process condensates include digester system condensates, turpentine recovery system condensates, evaporator system condensates, LVHC system condensates, HVLC system condensates and any other condensates from equipment serving the same function as those previously listed. Liquid streams that are intended for byproduct recovery are not considered process condensate streams.

c33d XPulping systemY means all process equipment, beginning with the digester system, and up to and including the last piece of pulp conditioning equipment prior to the bleaching system, including treatment with ozone, oxygen or peroxide before the first application of a chemical bleaching agent intended to brighten pulp. The pulping system includes pulping process condensates and can include multiple pulping lines.

c34d XRecovery furnaceY means an enclosed combustion device where concentrated spent liquor is burned to recover sodium and sulfur, produce steam and dispose of unwanted dissolved wood components in the liquor.

c35d XScreen systemY means equipment in which oversized particles are removed from the pulp slurry prior to the bleaching or papermaking system washed stock storage.

c36d XSecondary fiber pulpingY means a pulping process that converts a fibrous material, that has previously undergone a manufacturing process, into pulp stock through the addition of water and mechanical energy. The mill then uses that pulp as the raw material in another manufactured product. These mills may also utilize chemical, heat and mechanical processes to remove ink particles from the fiber stock.

c37d XSemi-chemical pulpingY means a pulping process that combines both chemical and mechanical pulping processes. The semi-chemical pulping process produces intermediate yields ranging from 55 to 90%.

c38d XSoda pulpingY means a chemical pulping process that uses sodium hydroxide as the active chemical in the cooking liquor.

c39d XSpent liquorY means process liquid generated from the separation of cooking liquor from pulp by the pulp washing system containing dissolved organic wood materials and residual cooking compounds.

c40d XSteam stripper systemY means a column, including associated stripper feed tanks, condensers or heat exchangers, used to remove compounds from wastewater or condensates using steam. The steam stripper system also contains all equipment associated with a methanol rectification process including rectifiers, condensers, decanters, storage tanks and any other equipment serving the same function as those previously listed.

c41d XStrong liquor storage tanksY means all storage tanks containing liquor that has been concentrated in preparation for combustion or oxidation in the recovery process.

c42d XSulfite pulpingY means a chemical pulping process that uses a mixture of sulfurous acid and bisulfite ion as the cooking liquor.

c43d XTemperature monitoring deviceY means a piece of equipment used to monitor temperature and having an accuracy of $\pm 1.0\%$ of the temperature being monitored expressed in degrees Celsius or ± 0.5 degrees Celsius $^{\circ}\text{C}$ d, whichever is greater.

c44d XThermal oxidizerY means an enclosed device that destroys organic compounds by thermal oxidation.

c45d XTurpentine recovery systemY means all equipment associated with recovering turpentine from digester system gases including condensers, decanters, storage tanks and any other equipment serving the same function as those previously listed. The turpentine recovery system includes any liquid streams associated with the turpentine recovery process such as turpentine decanter underflow. Liquid streams that are intended for byproduct recovery are not considered turpentine recovery system condensate streams.

c46d XWeak liquor storage tankY means any storage tank except washer filtrate tanks containing spent liquor recovered from the pulping process and prior to the evaporator system.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.03 Standards for the pulping system at kraft, soda and semi-chemical processes. **c1d** The owner or operator of each pulping system using the kraft process subject to the requirements of this chapter shall control the total

HAP emissions from the following equipment systems, as specified in subs. [c3d](#) and [c4d](#):

cad At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:

1. Each LVHC system.
2. Each knotter or screen system with a total HAP mass emission rate greater than or equal to the rate specified in subd. [2. a.](#) or [b.](#) or the combined rate specified in subd. [2. c.](#):
 - a. Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP c0.1 pounds per ton.
 - b. Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP c0.2 pounds per ton.
 - c. Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP c0.3 pounds per ton.
3. Each pulp washing system.
4. Each decker system that does one of the following:
 - a. Uses any process water other than fresh water or paper machine white water.
 - b. Uses any process water with a total HAP concentration greater than 400 parts per million by weight.
5. Each oxygen delignification system.

cbd At new affected sources, the total HAP emissions from the equipment systems listed in par. [cad 1.](#), [3.](#) and [5.](#) and all of the following equipment systems shall be controlled:

1. Each knotter system.
2. Each screen system.
3. Each decker system.
4. Each weak liquor storage tank.

c2d The owner or operator of each pulping system using a semi-chemical or soda process subject to the requirements of this chapter shall control the total HAP emissions from the following equipment systems, as specified in subs. [c3d](#) and [c4d](#).

cad At each existing affected sources, the total HAP emissions from each LVHC system shall be controlled.

cbd At each new affected source, the total HAP emissions from each LVHC system and each pulp washing system shall be controlled.

c3d Equipment systems listed in subs. [c1d](#) and [c2d](#) shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in sub. [c4d](#). The enclosures and closed-vent system shall meet the requirements specified in s. [NR 464.08](#).

c4d The control device used to reduce total HAP emissions from each equipment system listed in subs. [c1d](#) and [c2d](#) shall do one of the following:

- cad** Reduce total HAP emissions by 98% or more by weight.
- cbd** Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10% oxygen on a dry basis.
- ccd** Reduce total HAP emissions using one of the following:
1. A thermal oxidizer designed and operated at a minimum temperature of 871°C c1600 °F and a minimum residence time of 0.75 seconds.
 2. A boiler, lime kiln or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.
 3. A boiler or recovery furnace with a heat input capacity greater than or equal to 44 megawatts c150 million British thermal units per hour by introducing the HAP emission stream with the combustion air.

c5d Periods of excess emissions reported under s. [NR 464.11](#) are not a violation of subs. [c3d](#) and [c4d](#) provided that the time of excess emissions, excluding periods of startup, shutdown or malfunction, divided by the total process operating time in a semi-annual reporting period does not exceed any of the following levels:

cad One percent for control devices used to reduce the total HAP emissions from the LVHC system.

cbd Four percent for control devices used to reduce the total HAP emissions from the HVLC system.

ccd Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.04 Standards for the pulping system at sulfite processes.

c1d The owner or operator of each sulfite process subject to the requirements of this chapter shall control the total HAP emissions from the following equipment systems as specified in subs. [c2d](#) and [c3d](#):

cad At existing sulfite affected sources, the total HAP emissions from all of the following equipment systems shall be controlled:

1. Each digester system vent.
2. Each evaporator system vent.
3. Each pulp washing system.

cbd At new affected sources, the total HAP emissions from the equipment systems listed in par. [cad](#) and all of the following equipment shall be controlled:

1. Each weak liquor storage tank.
2. Each strong liquor storage tank.
3. Each acid condensate storage tank.

c2d Equipment listed in sub. [c1d](#) shall be enclosed and vented into a closed-vent system which routes emissions to a control device that meets the requirements specified in sub. [c3d](#). The enclosures and closed-vent system shall meet the requirements specified in s. [NR 464.08](#). Emissions from equipment listed in sub. [c1d](#) that do not need to be reduced to meet sub. [c3d](#) are not required to be routed to a control device.

c3d The total HAP emissions from both the equipment systems listed in sub. [c1d](#) and the vents, wastewater and condensate streams from the control device used to reduce HAP emissions shall be controlled as follows:

cad Each calcium-based or sodium-based sulfite pulping process shall do one of the following:

1. Emit no more than 0.44 kilograms of total HAP or methanol per megagram c0.89 pounds per ton of ODP.
2. Remove 92% or more by weight of the total HAP or methanol.

cbd Each magnesium-based or ammonium-based sulfite pulping process shall do one of the following:

1. Emit no more than 1.1 kilograms of total HAP or methanol per megagram c2.2 pounds per ton of ODP.
2. Remove 87% or more by weight of the total HAP or methanol.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.05 Standards for the bleaching system.

c1d Each bleaching system that does not use any chlorine or chlorinated compounds for bleaching is exempt from the requirements of this section. Owners or operators of the following bleaching systems shall meet all the provisions of this section:

cad Bleaching systems that use chlorine.

cbd Bleaching systems bleaching pulp from kraft, sulfite or soda pulping processes that use any chlorinated compounds.

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

c2d The equipment at each bleaching stage of the bleaching systems listed in sub. **c1d** where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system which routes emissions to a control device that meets the requirements specified in sub. **c3d**. The enclosures and closed-vent system shall meet the requirements specified in s. NR 464.08. If process modifications are used to achieve compliance with the emission limits specified in sub. **c3d cbd** or **ccd**, enclosures and closed-vent systems are not required.

c3d The control device used to reduce chlorinated HAP emissions, not including chloroform, from the equipment specified in sub. **c2d** shall do one of the following:

cad Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99% or more by weight.

cbd Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP.

ccd Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram c0.002 pounds per ton of ODP.

c4d The owner or operator of each bleaching system subject to sub. **c1d cbd** shall comply with par. **cad** or **cbd** to reduce chloroform air emissions to the atmosphere, except the owner or operator of each bleaching system complying with extended compliance under s. NR 464.01 **c1d ced 1. to 3.** shall comply with par. **cad**. The owner or operator shall:

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

1. Dissolving-grade kraft bleaching systems and lines, 40 CFR 430.14 to 430.17.

2. Paper-grade kraft and soda bleaching systems and lines, 40 CFR 430.24**cad c1d** and **ced**, and 40 CFR 430.26**cad** and **ccd**.

3. Dissolving-grade sulfite bleaching systems and lines, 40 CFR 430.44 to 430.47.

4. Paper-grade sulfite bleaching systems and lines, 40 CFR 430.54**cad** and **ccd**, and 40 CFR 430.56**cad** and **ccd**.

cbd Use no hypochlorite or chlorine for bleaching in the bleaching system or line.

History: CR 00-175; cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.06 Standards for kraft pulping process condensates. **c1d** The requirements of this section apply to owners or operators of kraft processes subject to the requirements of this chapter.

c2d The pulping process condensates from the following equipment systems shall be treated to meet the requirements specified in subs. **c3d**, **c4d** and **c5d**:

cad Each digester system.

cbd Each turpentine recovery system.

ccd Each evaporator system condensate from both of the following:

1. The vapors from each stage where weak liquor is introduced cfeed stagesd.

2. Each evaporator vacuum system for each stage where weak liquor is introduced cfeed stagesd.

cdd Each HVLC collection system.

ced Each LVHC collection system.

c3d One of the following combinations of HAP-containing pulping process condensates generated, produced or associated

with the equipment systems listed in sub. **c2d** shall be subject to the requirements of subs. **c4d** and **c5d**:

cad All pulping process condensates from the equipment systems specified in sub. **c2d cad** to **ced**.

cbd The combined pulping process condensates from the equipment systems specified in sub. **c2d cdd** and **ced**, plus pulping process condensate streams that in total contain at least 65% of the total HAP mass from the pulping process condensates from equipment systems listed in sub. **c2d cad** to **ccd**.

ccd The pulping process condensates from equipment systems listed in sub. **c2d cad** to **ced** that in total contain a total HAP mass of 3.6 kilograms or more of total HAP per megagram c7.2 pounds per ton of ODP for mills that do not perform bleaching or 5.5 kilograms or more of total HAP per megagram c11.1 pounds per ton of ODP for mills that perform bleaching.

c4d The pulping process condensates from the equipment systems listed in sub. **c2d** shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in pars. **cad** and **cbd**:

cad Each closed collection system shall meet the individual drain system requirements specified in 40 CFR 63.960, 63.961 and 63.962 of subpart RR, except closed-vent systems and control devices shall be designed and operated in accordance with 40 CFR 63.443**cedd** and 63.450, instead of in accordance with 40 CFR 63.962**cadc3dciid**, **cbdc3dciidcAd** and **c5dciid**.

cbd If a condensate tank is used in the closed collection system, the tank shall meet both of the following requirements:

1. The fixed roof and all openings, such as access hatches, sampling ports and gauge wells, shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in s. NR 464.08 and routed to a control device that meets the requirements in s. NR 464.03 **c4d**.

2. Each opening shall be maintained in a closed, sealed position, e.g., covered by a lid that is gasketed and latched, at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance or repair.

c5d Each pulping process condensate from the equipment systems listed in sub. **c2d** shall be treated according to one of the following options:

cad Recycle the pulping process condensate to an equipment system specified in s. NR 464.03 **c1d** meeting the requirements specified in s. NR 464.03 **c3d** and **c4d**.

cbd Discharge the pulping process condensate below the liquid surface of a biological treatment system and treat the pulping process condensates to meet the requirements specified in par. **ccd**, **cdd** or **ced**, and measuring total HAP as specified in 40 CFR 63.457**cgd**.

ccd Treat the pulping process condensates to reduce or destroy the total HAPs by 92% or more by weight.

cdd At mills that do not perform bleaching, treat the pulping process condensates to remove 3.3 kilograms or more of total HAP per megagram c6.6 pounds per ton of ODP, or achieve a total HAP concentration of 210 parts per million or less by weight at the outlet of the control device.

ced At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram c10.2 pounds per ton of ODP, or achieve a total HAP concentration of 330 parts per million or less by weight at the outlet of the control device.

c6d Each HAP removed from a pulping process condensate stream during treatment and handling under sub. **c4d** or **c5d**, except for those treated according to sub. **c5d cbd**, shall be controlled as specified in s. **NR 464.03 c3d** and **c4d**.

c7d For each control device, such as a steam stripper system or other equipment serving the same function, used to treat pulping process condensates to comply with the requirements specified in sub. **c5d ccd** to **ced**, periods of excess emissions reported under s. **NR 464.05** are not a violation subs. **c4d** and **c5d ccd** to **ced** and **c6d** provided that the time of excess emissions, including periods of startup, shutdown or malfunction, divided by the total process operating time in a semi-annual reporting period does not exceed 10%. The 10% excess emissions allowance does not apply to treatment of pulping process condensates according to sub. **c5d cbd** as done, for example, with the biological wastewater treatment system used to treat multiple wastewater streams to comply with the clean water act.

c8d Each owner or operator of a new or existing affected source subject to the requirements of this section shall evaluate all new or modified pulping process condensates or changes in the annual bleached or non-bleached ODP used to comply with sub. **c9d** to determine if they meet the applicable requirements of this section.

c9d For the purposes of meeting the requirements in sub. **c3d cbd** or **ccd** or **c5d cdd** or **ced** at mills producing both bleached and unbleached pulp products, owners and operators may meet a prorated mass standard that is calculated by prorating the applicable mass standards ckilograms of total HAP per megagram of ODPd for bleached and unbleached mills specified in sub. **c3d cbd** or **ccd** or **c5d cdd** or **ced** by the ratio of annual megagrams of bleached and unbleached ODP.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.07 Clean condensate alternative. As an alternative to the requirements specified in s. **NR 464.03 c1d cad 2**. to **5**. for the control of HAP emissions from pulping systems using the kraft process, an owner or operator shall demonstrate to the satisfaction of the department, by meeting all the requirements of this section, that the total HAP emissions reductions achieved by this clean condensate alternative technology are equal to or greater than the total HAP emission reductions that would have been achieved by compliance with s. **NR 464.03 c1d cad 2**. to **5**.

c1d For the purposes of this section only the following additional definitions apply:

cad XClean condensate alternative affected sourceY means the total of all HAP emission points in the pulping, bleaching, causticizing and papermaking systems, exclusive of HAP emissions attributable to additives to paper machines and HAP emission points in the LVHC system.

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

ccd XPapermaking systemY means all equipment used to convert pulp into paper, paperboard or market pulp, including the stock storage and preparation systems, the paper or paperboard machines, and the paper machine white water system, broke recovery systems, and the systems involved in calendaring, drying, on-machine coating, slitting, winding and cutting.

c2d Each owner or operator shall install and operate a clean condensate alternative technology with a continuous monitoring system to reduce total HAP emissions by treating and reducing HAP concentrations in the pulping process water used within the clean condensate alternative affected source.

c3d Each owner or operator shall calculate HAP emissions on a kilogram per megagram of ODP basis and measure HAP emissions according to the appropriate procedures contained in **40 CFR 63.457**, incorporated by reference in s. **NR 484.03 c6d**.

c4d Each owner or operator shall determine the baseline HAP emissions for each equipment system and the total of all equipment systems in the clean condensate alternative affected source based on the following:

cad Process and air pollution control equipment installed and operating on December 17, 1993.

cbd Compliance with the all following requirements that affect the level of HAP emissions from the clean condensate alternative affected source:

1. The pulping process condensates requirements in s. **NR 464.06**.
2. The applicable effluent limitation guidelines and standards in **40 CFR part 430**, subparts A, B, D and E.
3. All other applicable requirements of local, state or federal agencies or statutes.

c5d Each owner or operator shall determine the following HAP emission reductions from the baseline HAP emissions determined in sub. **c4d** for each equipment system and the total of all equipment systems in the clean condensate alternative affected source:

cad The HAP emission reduction occurring by complying with the requirements of s. **NR 464.03 c1d cad 2**. to **5**.

cbd The HAP emissions reduction occurring by complying with the clean condensate alternative technology.

c6d For the purposes of all requirements in this section, each owner or operator may use as an alternative, individual equipment systems, instead of total of all equipment systems, within the clean condensate alternative affected source to determine emissions and reductions to demonstrate achievement of equal or greater than the reductions that would have been achieved by compliance with of s. **NR 464.03 c1d cad 2**. to **5**.

c7d The initial and updates to the control strategy report specified in s. **NR 464.11** shall include to the extent possible the following information:

cad A detailed description of all of the following:

1. The equipment systems and emission points that comprise the clean condensate alternative affected source.
2. The air pollution control technologies that would be used to meet the requirements of s. **NR 464.03 c1d cad 2**. to **5**.
3. The clean condensate alternative technology to be used.

cbd Estimates and basis for the estimates of total HAP emissions and emissions reductions to fulfill the requirements subs. **c4d**, **c5d** and **c6d**.

c8d Each owner or operator shall report to the department by the applicable compliance date specified in s. **NR 464.01 c1d cdd**, **ced** or **cf**d the rationale, calculations, test procedures and data documentation used to demonstrate compliance with all the requirements of this section.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.08 Standards for enclosures and closed-vent systems. **c1d** Each enclosure and closed-vent system specified in ss. **NR 464.03 c3d**, **464.04 c2d** and **464.05 c2d** for

capturing and transporting vent streams that contain HAP shall meet the requirements specified in subs. [c2d](#) to [c4d](#).

c2d Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in [40 CFR 63.457ced](#), incorporated by reference in s. [NR 484.03 c6d](#). Each enclosure or hood opening closed during the initial performance test specified in [40 CFR 63.457cad](#) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance or repairs.

c3d Each component of the closed-vent system used to comply with ss. [NR 464.03 c3d](#), [464.04 c2d](#) and [464.05 c2d](#) that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in [40 CFR 63.457cdd](#), incorporated by reference in s. [NR 484.03 c6d](#).

c4d Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in ss. [NR 464.03](#) to [464.05](#) shall comply with either of the following requirements:

cad On each bypass line, the owner or operator shall install, calibrate, maintain and operate according to manufacturer[s] specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line.

cbd For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.09 Monitoring requirements. **c1d** Each owner or operator subject to the standards specified in s. [NR 464.03 c3d](#) and [c4d](#), [464.04 c2d](#) and [c3d](#), [464.05 c2d](#) and [c3d](#), [464.06 c3d](#), [c4d](#) and [c5d](#), [464.07 c2d](#) or [464.08 c4d](#), shall install, calibrate, certify, operate and maintain according to the manufacturer[s] specifications, a continuous monitoring system cCMSd, as defined in s. [NR 460.02 c12d](#), as specified in subs. [c2d](#) to [c13d](#), except as allowed in sub. [c13d](#). The CMS shall include a continuous recorder.

c2d A CMS shall be operated to measure the temperature in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs for each thermal oxidizer used to comply with the requirements of s. [NR 464.03 c4d cad](#) to [ccd](#). Owners and operators complying with the HAP concentration requirements in s. [NR 464.03 c4d cbd](#) may install a CMS to monitor the thermal oxidizer outlet total HAP or methanol concentration, as an alternative to monitoring thermal oxidizer operating temperature.

c3d A CMS shall be operated to measure all the following parameters for each gas scrubber used to comply with the bleaching system requirements of s. [NR 464.05 c3d](#) or the sulfite pulping system requirements of s. [NR 464.04 c3d](#):

cad The pH or the oxidation{reduction potential of the gas scrubber effluent.

cbd The gas scrubber vent gas inlet flow rate.

ccd The gas scrubber liquid influent flow rate.

c4d As an option to the requirements specified in sub. [c3d](#), a CMS shall be operated to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching sys-

tem outlet concentration requirement specified in s. [NR 464.05 c3d cbd](#).

c5d The owner or operator of a bleaching system complying with [40 CFR 430.24](#) shall monitor the chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system during the extended compliance period specified in s. [NR 464.01 c1d ced](#).

c6d A CMS shall be operated to measure the gas scrubber parameters specified in sub. [c3d cad](#) to [ccd](#) or those site specific parameters determined according to the procedures specified in sub. [c14d](#) to comply with the sulfite pulping system requirements specified in s. [NR 464.04 c3d](#).

c7d A CMS shall be operated to measure all the following parameters for each steam stripper used to comply with the treatment requirements in s. [NR 464.06 c5d ccd](#), [cdd](#) or [ced](#):

cad The process wastewater feed rate.

cbd The steam feed rate.

ccd The process wastewater column feed temperature.

c8d As an option to the requirements specified in sub. [c7d](#), a CMS shall be operated to measure the methanol outlet concentration to comply with the steam stripper outlet concentration requirement specified in s. [NR 464.06 c5d cdd](#) or [ced](#).

c9d A CMS shall be operated to measure the appropriate parameters determined according to the procedures specified in sub. [c14d](#) to comply with the condensate applicability requirements specified in s. [NR 464.06 c3d](#).

c10d Each owner or operator using an open biological treatment system to comply with s. [NR 464.06 c5d cbd](#) shall perform the monitoring procedures specified in either pars. [cad](#) and [cbd](#) or par. [ccd](#) and shall conduct a performance test each quarter using the procedures specified in par. [cdd](#):

cad On a daily basis, monitor all the following parameters for each biological treatment unit:

1. Composite daily sample of outlet soluble BOD₅ concentration to monitor for maximum daily and maximum monthly average.

2. Mixed liquor volatile suspended solids.

3. Horsepower of each aerator unit.

4. Inlet liquid flow.

5. Liquid temperature.

cbd If the Inlet and Outlet Concentration Measurements procedure cProcedure 3d in Appendix C of [40 CFR part 63](#), incorporated by reference in s. [NR 484.04 c25gd](#), is used to determine the fraction of HAP compounds degraded in the biological treatment system as specified in [40 CFR 63.457cld](#), carry out the sampling and archival requirements specified in subs. [1.](#) and [2.](#):

1. Obtain daily inlet and outlet liquid grab samples from each biological treatment unit to have HAP data available to perform quarterly performance tests specified in par. [cdd](#) and the compliance tests specified in sub. [c16d](#).

2. Store the samples as specified in [40 CFR 63.457cnd](#) until after the results of the soluble BOD₅ test required in par. [cad 1.](#) are obtained. The storage requirement is needed since the soluble BOD₅ test requires 5 days or more to obtain results. If the results of the soluble BOD₅ test are outside of the range established during the initial performance test, then the archive sample shall be used to perform the mass removal or percent reduction determinations.

ccd As an alternative to the monitoring requirements of pars. [cad](#) and [cbd](#), conduct daily monitoring of the site-specific parameters established according to the procedures specified in sub. [c14d](#).

cdd Conduct a performance test as specified in 40 CFR part 63.457cld within 45 days after the beginning of each quarter and meet the applicable emission limit in s. NR 464.06 c5d cbd.

1. The performance test conducted in the first quarter, annually, shall be performed for total HAP as specified in 40 CFR 63.457cgd and meet the percent reduction or mass removal emission limit specified in s. NR 464.06 c5d cbd.

2. The remaining quarterly performance tests shall be performed as specified in subd. 1. except owners or operators may use the applicable methanol procedure in 40 CFR 63.457cldc1d or c2d and the value of r determined during the first quarter test instead of measuring the additional HAP to determine a new value of r.

c11d Each enclosure and closed-vent system used to comply with s. NR 464.08 c1d shall comply with the requirements specified in pars. cad to cfd:

cad For each enclosure opening, a visual inspection of the closure mechanism specified in s. NR 464.08 c2d shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.

cbd Each closed-vent system required by s. NR 464.08 c1d shall be visually inspected every 30 days and at other times as requested by the department. The visual inspection shall include inspection of ductwork, piping, enclosures and connections to covers for visible evidence of defects.

ccd For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in s. NR 464.08 c3d, measured initially and annually by the procedures in 40 CFR 63.457cdd, incorporated by reference in s. NR 484.03 c6d.

cdd Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 40 CFR 63.457ced, incorporated by reference in s. NR 484.03 c6d.

ced The valve or closure mechanism specified in s. NR 464.08 c4d cbd shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

cfd If an inspection required by pars. cad to ced identifies visible defects in ductwork, piping, enclosures or connections to covers required by s. NR 464.08, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable:

1. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.

2. The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the owner or operator determines that the emissions resulting from immediate repair would be greater than the emission likely to result from delay. Repair of the equipment shall be completed by the end of the next process shutdown.

c12d Each pulping process condensate closed collection system used to comply with s. NR 464.06 c4d shall comply with the requirements of pars. cad to ccd:

cad Each pulping process condensate closed collection system shall be visually inspected every 30 days and shall comply with the inspection and monitoring requirements specified in 40 CFR 63.964 of subpart RR, except:

1. Owners and operators shall comply with the recordkeep-

ing requirements of s. NR 464.10 instead of the requirements of 40 CFR 63.964cadc1dcvid and cbdc3d.

2. Owners and operators shall comply with inspection and monitoring requirements specified in subs. c1d and c11d instead of 40 CFR 63.964cadc2d of subpart RR.

cbd Each condensate tank used in the closed collection system shall be operated with no detectable leaks as specified in s. NR 464.06 c4d cbd 1., measured initially and annually by the procedures in 40 CFR 63.457cdd, incorporated by reference in s. NR 484.03 c6d.

ccd If an inspection required by this section identifies visible defects in the closed collection system, or if an instrument reading of 500 ppm or greater above background is measured, then corrective actions specified in 40 CFR 63.964cbd of subpart RR shall be taken.

c13d Each owner or operator using a control device, technique or an alternative parameter other than those specified in subs. c2d to c12d shall install a CMS and establish appropriate operating parameters to be monitored that demonstrate, to the administrator[s] satisfaction, continuous compliance with the applicable control requirements.

Note: Under 40 CFR 458cbdc2d, implementation of sub. c13d requires approval by EPA.

c14d To establish or reestablish the value for each operating parameter required to be monitored under subs. c2d to c10d, c12d and c13d or to establish appropriate parameters for subs. c6d, c9d, c10d ccd and c13d, each owner or operator shall use the following procedures:

cad During the initial performance test required in 40 CFR 63.457cad, incorporated by reference in s. NR 484.03 c6d, or any subsequent performance test, continuously record the operating parameter.

cbd Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer[s] recommendations.

ccd The owner or operator shall provide for the department[s] approval the rationale for selecting the monitoring parameters necessary to comply with subs. c6d and c9d and shall provide for the administrator[s] approval the rationale for selecting the monitoring parameters necessary to comply with sub. c13d.

cdd Provide for the department[s] approval the rationale for the selected operating parameter value, and monitoring frequency, and averaging time. Include all data and calculations used to develop the value and a description of why the value, monitoring frequency and averaging time demonstrate continuous compliance with the applicable emission standard.

c15d Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum or maximum, as appropriate, operating parameter value or procedure required to be monitored under subs. c1d to c14d and established under this chapter. Except as provided in sub. c16d, s. NR 464.03 c5d or 464.06 c7d, operation of the control device below minimum operating parameter values or above maximum operating parameter values established under this chapter or failure to perform procedures required by this chapter shall constitute a violation of the applicable emission standard of this chapter and be reported as a period of excess emissions.

c16d The procedures of this paragraph apply to each owner or operator of an open biological treatment system complying with sub. c10d whenever a monitoring parameter excursion occurs, and the owner or operator chooses to conduct a performance test to demonstrate compliance with the applicable emission

limit. A monitoring parameter excursion occurs whenever the monitoring parameters specified in sub. [c10d cad 1. to 3.](#) or any of the monitoring parameters specified in sub. [c10d ccd](#) are below minimum operating parameter values or above maximum operating parameter values established in sub. [c14d](#).

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

1. Before the steps in subd. [2.](#) or [3.](#) are performed, all sampling and measurements necessary to meet the requirements in par. [cbd](#) shall be conducted.

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

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

cbd A parameter excursion is not a violation of the applicable emission standard if the results of the performance test conducted using the procedures in this paragraph demonstrate compliance with the applicable emission limit in s. [NR 464.06 c5d cbd](#).

1. Conduct a performance test as specified in [40 CFR 63.457](#) using the monitoring data specified in sub. [c10d cad to ccd](#) that coincides with the time of the parameter excursion. No maintenance or changes shall be made to the open biological treatment system after the beginning of a parameter excursion that would influence the results of the performance test.

2. If the results of the performance test specified in subd. [1.](#) demonstrate compliance with the applicable emission limit in s. [NR 464.06 c5d cbd](#), then the parameter excursion is not a violation of the applicable emission limit.

3. If the results of the performance test specified in subd. [1.](#) do not demonstrate compliance with the applicable emission limit in s. [NR 464.06 c5d cbd](#) because the total HAP mass entering the open biological treatment system is below the level needed to demonstrate compliance with the applicable emission limit in s. [NR 464.06 c5d cbd](#), then the owner or operator shall perform the following comparisons:

- a. If the value of f_{bio} cMeOHd determined during the performance test specified in subd. [1.](#) is within the range of values established during the initial and subsequent performance tests approved by the department, then the parameter excursion is not a violation of the applicable standard.

- b. If the value of f_{bio} cMeOHd determined during the performance test specified in subd. [1.](#) is not within the range of values established during the initial and subsequent performance tests approved by the department, then the parameter excursion is a violation of the applicable standard.

4. The results of the performance test specified in subd. [1.](#) shall be recorded as specified in s. [NR 464.10 c6d](#).

ccd If an owner or operator determines that performing the required procedures under par. [cbd](#) for a nonthoroughly mixed open biological system would expose a worker to dangerous, hazardous or otherwise unsafe conditions, all of the following procedures shall be performed:

1. Calculate the mass removal or percent reduction value using the procedures specified in [40 CFR 63.457cld](#) except the value for f_{bio} cMeOHd shall be determined using the procedures in Appendix E of [40 CFR part 63](#), incorporated by reference in s. [NR 484.04 c25rd](#).

2. Repeat the procedures in subd. [1.](#) for every day until the unsafe conditions have passed.

3. A parameter excursion is a violation of the standard if the percent reduction or mass removal determined in subd. [1.](#) is less than the percent reduction or mass removal standards specified in s. [NR 464.06 c5d cbd](#), as appropriate, unless the value of f_{bio}

cMeOHd determined using the procedures in [40 CFR part 63](#) Appendix E, as specified in subd. [1.](#), is within the range of f_{bio} cMeOHd values established during the initial and subsequent performance tests previously approved by the department.

4. The determination that there is a condition that exposes a worker to dangerous, hazardous or otherwise unsafe conditions shall be documented according to requirements in s. [NR 464.10 c5d](#) and reporting in s. [NR 464.11 c6d](#).

5. The requirements of pars. [cad](#) and [cbd](#) shall be performed and met as soon as practical but no later than 24 hours after the conditions have passed that exposed a worker to dangerous, hazardous or otherwise unsafe conditions.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.10 Recordkeeping requirements. c1d The owner or operator of each affected source subject to the requirements of this chapter shall comply with the applicable recordkeeping requirements of ch. [NR 460](#) and the requirements specified in subs. [c2d to c6d](#) for the monitoring parameters specified in s. [NR 464.09](#).

c2d For each applicable enclosure opening, closed-vent system and closed collection system, the owner or operator shall prepare and maintain a site-specific inspection plan, including a drawing or schematic of the components of applicable affected equipment, and shall record all of the following information for each inspection:

cad Date of inspection.

cbd The equipment type and identification.

ccd Results of negative pressure tests for enclosures.

cdd Results of leak detection tests.

ced The nature of the defect or leak and the method of detection, that is, visual inspection or instrument detection.

cf The date the defect or leak was detected and the date of each attempt to repair the defect or leak.

cgd Repair methods applied in each attempt to repair the defect or leak.

chd The reason for the delay if the defect or leak is not repaired within 15 days after discovery.

cid The expected date of successful repair of the defect or leak if the repair is not completed within 15 days.

cjd The date of successful repair of the defect or leak.

ckd The position and duration of opening of bypass line valves and the condition of any valve seals.

cld The duration of the use of bypass valves on computer controlled valves.

c3d The owner or operator of a bleaching system complying with s. [NR 464.01 c1d ced 2.](#) shall record the daily average chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system until the requirements specified in s. [NR 464.01 c1d ced 1.](#) are met.

c4d The owner or operator shall record the CMS parameters specified in s. [NR 464.09](#) and meet the requirements specified in sub. [c1d](#) for any new affected process equipment or pulping process condensate stream that becomes subject to the standards in this chapter due to a process change or modification.

c5d The owner or operator of an open nonthoroughly mixed biological treatment system complying with s. [NR 464.09 c16d ccd](#) instead of s. [NR 464.09 c16d cbd](#) shall prepare a written record identifying the specific conditions that would expose a worker to dangerous, hazardous or otherwise unsafe conditions. The record shall include a written explanation of the specific reason or reasons why a worker would not be able to perform the sampling and test procedures specified in [40 CFR 63.457cld](#).

c6d The owner or operator of an open biological treatment system complying with s. NR 464.09 c16d shall prepare a written record specifying the results of the performance test specified in s. NR 464.09 c16d cbd.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.

NR 464.11 Reporting requirements. c1d Each owner or operator of a source subject to this chapter shall comply with the reporting requirements of ch. NR 460 as specified in Appendix S of ch. NR 460 and all the following requirements in this section. The initial notification report specified in s. NR 460.08 c2d cbd shall have been submitted by April 15, 1999 for existing sources.

c2d Each owner or operator of a kraft pulping system specified in s. NR 464.01 c1d cdd 1. or a bleaching system specified in s. NR 464.01 c1d ced 1. to 3. shall submit, with the initial notification report specified in s. NR 460.08 c2d cbd and sub. c1d and update every 2 years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in pars. cad to ccd in addition to the information required in s. NR 460.08 c2d cbd:

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

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

1. The date by which the major study or studies for determining the compliance strategy will be completed.
2. The date by which contracts for emission controls or process modifications will be awarded, or the date by which orders will be issued for the purchase of major components to accomplish emission controls or process changes.
3. The date by which on-site construction, installation of emission control equipment or a process change is to be initiated.
4. The date by which on-site construction, installation of emissions control equipment or a process change is to be completed.
5. The date by which final compliance is to be achieved.
6. For compliance with s. NR 464.01 c1d ced 1. to 3., the tentative dates by which compliance is to be achieved with effluent limitation guidelines and standards for intermediate pollutant load effluent reductions, and, as available, all the dates for the

best available technology[s milestones reported in the national pollutant discharge elimination system authorized under section 402 of the clean water act c33 USC 1342d and for the best professional milestones in the voluntary advanced technology incentives program under 40 CFR 430.24cbd c2d.

7. The date by which the final compliance tests shall be performed.

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

c3d The owner or operator of each bleaching system complying with s. NR 464.01 c1d ced 2. shall certify in the report specified under s. NR 460.09 c5d ccd that the daily application rates of chlorine and hypochlorite for that bleaching system have not increased as specified in s. NR 464.01 c1d ced 2. until the requirements of s. NR 464.01 c1d ced 1. are met.

c4d The owner or operator shall meet the requirements specified in sub. c1d upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of this chapter due to a process change or modification.

c5d If the owner or operator uses the results of the performance test required in s. NR 464.09 c16d cbd to revise the approved values or ranges of the monitoring parameters specified in s. NR 464.09 c10d cad to ccd, the owner or operator shall submit an initial notification of the subsequent performance test to the department as soon as practicable, but no later than 15 days, before the performance test required in s. NR 464.09 c16d cbd is scheduled to be conducted. The owner or operator shall notify the department as soon as practicable, but no later than 24 hours, before the performance test is scheduled to be conducted to confirm the exact date and time of the performance test.

c6d To comply with the open biological treatment system monitoring provisions of s. NR 464.09 c16d ccd, the owner or operator shall notify the department as soon as practicable of the onset of the dangerous, hazardous or otherwise unsafe conditions that did not allow a compliance determination to be conducted using the sampling and test procedures in 40 CFR 63.457cld. The notification shall occur no later than 24 hours after the onset of the dangerous, hazardous or otherwise unsafe conditions and shall include the specific reason or reasons that the sampling and test procedures in 40 CFR 63.457cld could not be performed.

History: CR 00-175: cr. Register March 2002 No. 555, eff. 4-1-02.