Chapter NR 632

AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

NR 632.01 Purpose. The purpose of this chapter is to specify general requirements for equipment leaks for distillation, fractionation, thin-film evaporation, solvent extraction, air or steam stripping at facilities that manage hazardous wastes with organic concentrations of at least 10-ppmw.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.02 Applicability. (1) This chapter applies to owners and operators of facilities that treat, store or dispose of hazardous wastes.

(2) Except as provided in s. NR 632.09 (11), this chapter applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10% by weight that are managed in:

(a) Units that are subject to the licensing requirements of chs. NR 680 and 685, or

(b) Hazardous waste recycling units that are located on hazardous waste management facilities otherwise subject to the licensing requirements of chs. NR 680 and 685.

(3) If the owner or operator of equipment subject to the requirements of ss. NR 632.06 (1) to 632.10 has received a license from the department under chs. NR 600 to 685 prior to December 21, 1990, the requirements of ss. NR 632.06 (1) to 632.10 shall be incorporated when the license is reviewed under s. NR 680.45 (6) to (8).

(4) Each piece of equipment to which this chapter applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

(5) Equipment that is in vacuum service is excluded from the requirements of s. NR 632.06 if it is identified as required in s. NR 632.09 (7) (e).

Note: The requirements of ss. NR 632.06 to 632.10 apply to equipment associated with hazardous waste recycling units that were exempt under s. NR 625.04 (4) prior to the adoption of this chapter. Other exemptions under ss. NR 605.05, 610.07 (1), 610.08 (1), 615.05 (4) and 630.04 are not affected by these requirements.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.03 Definitions. As used in this chapter, all terms shall have the meaning given them in ss. NR 600.03 and 631.03.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.05 General. Except as otherwise provided in s. NR 632.02, no person may operate a distillation, fractionation, thin-film evaporation, solvent extraction, or air or stream stripping operation managing hazardous wastes with organic concentrations of at least 10-ppmw, unless the person has obtained an operating license, interim license, variance or waiver from the department, in accordance with s. NR 600.09 or ch. NR 680 or operates a legitimate recovery and reclamation unit in compliance with ss. NR 625.04 and 625.06.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.06 Standards. (1) PUMPS IN LIGHT LIQUID SERVICE. (a) 1. Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in s. NR 632.08 (2), except as provided in pars. (d) to (f).

2. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b) 1. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

2. If there are indications of liquids dripping from the pump seal, a leak is detected.

(c) 1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in sub. (8).

2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

Note: An example of a first attempt at repair would include tightening the packing gland.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of par. (a), provided the following requirements are met:

1. Each dual mechanical seal system shall be:

a. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or

b. Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of sub. (9), or

c. Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

2. The barrier fluid system may not be a hazardous waste with organic concentrations 10% or greater by weight.

3. Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

4. Each pump shall be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

5. a. Each sensor as described in subd. 3. shall be checked daily or be equipped with an audible alarm that shall be checked monthly to ensure that it is functioning properly.

b. The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

6. a. If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in subd. 5.b., a leak is detected.

b. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in sub. (8).

c. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

Note: An example of a first attempt at repair would include relapping the seal.

(e) Any pump that is designated, as described in s. NR 632.09 (7) (b) 1., for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of pars. (a), (c) and (d) if the pump meets the following requirements:

1. The pump shall have no externally actuated shaft penetrating the pump housing.

2. The pump shall operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in s. NR 632.08 (3).

3. The pump shall be tested for compliance with subd. 2. initially upon designation, annually, and at other times as requested by the department.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of sub. (9), it is exempt from the requirements of pars. (a) to (e).

(2) COMPRESSORS. (a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in pars. (h) and (i).

(b) Each compressor seal system as required in par. (a) shall be:

1. Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure, or

2. Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of sub. (9), or

3. Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

(c) The barrier fluid may not be a hazardous waste with organic concentrations 10% or greater by weight.

(d) Each barrier fluid system as described in pars. (a) to (c) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system or both.

(e) 1. Each sensor as required in par. (d) shall be checked daily or shall be equipped with an audible alarm that shall be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor shall be checked daily.

2. The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system or both based on the criterion determined under par. (e) 2., a leak is detected.

(g) 1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in sub. (8).

2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

Note: An example of a first attempt at repair would include tightening the packing gland.

(h) A compressor is exempt from the requirements of pars. (a) and (b) if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of sub. (9), except as provided in par. (i).

(i) Any compressor that is designated, as described in s. NR 632.09 (7) (b) 1., for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of pars. (a) to (h) if the compressor:

1. Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in s. NR 632.08 (3).

2. Is tested for compliance with subd. 1. initially upon designation, annually and at other times as requested by the department.

(3) PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE. (a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in s. NR 632.08 (3).

(b) 1. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less

than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in sub. (8).

2. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in s. NR 632.08 (3).

(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in sub. (9) is exempt from the requirements of pars. (a) and (b).

(4) SAMPLING CONNECTING SYSTEMS. (a) Each sampling connection system shall be equipped with a closed purge system or closed-vent system.

(b) Each closed-purge system or closed-vent system required in par. (a) shall:

1. Return the purged hazardous waste stream directly to the hazardous waste management process line with no detectable emissions to atmosphere, or

2. Collect and recycle the purged hazardous waste stream with no detectable emissions to atmosphere, or

3. Be designed and operated to capture and transport all the purged hazardous waste stream to a control device that complies with the requirements of sub. (9).

(c) In situ sampling systems are exempt from the requirements of pars. (a) and (b).

(5) OPEN-ENDED VALVES OR LINES. (a) 1. Each open-ended valve or line shall be equipped with a cap, blind flange, plug or a second valve.

2. The cap, blind flange, plug or second valve shall seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with par. (a) at all other times.

(6) VALVES IN GAS SERVICE, VAPOR SERVICE OR IN LIGHT LIQUID SERVICE. (a) Each valve in gas service, vapor service or light liquid service shall be monitored monthly to detect leaks by the methods specified in s. NR 632.08 (2) and shall comply with pars. (b) to (e), except as provided in pars. (f) to (h) and s. NR 632.07 (1) and (2).

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) 1. Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

2. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d) 1. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in sub. (8).

2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

1. Tightening of bonnet bolts.

2. Replacement of bonnet bolts.

3. Tightening of packing gland nuts.

4. Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in s. NR 632.09 (7) (b) 1., for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of par. (a) if the valve:

1. Has no external actuating mechanism in contact with the hazardous waste stream.

2. Is operated with emissions less than 500 ppm above background as determined by the method specified in s. NR 632.08 (3).

3. Is tested for compliance with subd. 2. initially upon designation, annually, and at other times as requested by the department.

(g) Any valve that is designated, as described in s. NR 632.09 (8) (a), as an unsafe-to-monitor valve is exempt from the requirements of par. (a) if:

1. The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with par. (a).

2. The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in s. NR 632.09 (8) (b), as a difficult-to-monitor valve is exempt from the requirements of par. (a) if:

1. The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

2. The hazardous waste management unit within which the valve is located was in operation before June 21, 1990.

3. The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

(7) PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICES IN LIGHT LIQUID OR HEAVY LIQUID SERVICE, AND FLANGES AND OTHER CONNECTORS. (a) Pumps and valves in heavy liquid service, pressure relief

devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within 5 days by the method specified in s. NR 632.08 (2) if evidence of a potential leak is found by visual, audible, olfactory or any other detection method.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) 1. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in sub. (8).

2. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under sub. (6) (e).

(8) DELAY OF REPAIR. (a) Delay of repair of equipment for which leaks have been detected may be allowed if the repair is technically infeasible without a hazardous waste management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous waste management unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous waste management unit and that does not continue to contain or contact hazardous waste with organic concentrations at least 10% by weight.

(c) Delay of repair for valves may be allowed if:

1. The owner or operator determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.

2. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with sub. (9).

(d) Delay of repair for pumps may be allowed if:

1. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.

2. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a hazardous waste management unit shutdown may be allowed for a valve if valve assembly replacement is necessary during the hazardous waste management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will not be allowed unless the next hazardous waste management unit shutdown occurs sooner than 6 months after the first hazardous waste management unit shutdown.

(9) CLOSED VENT SYSTEMS AND CONTROL DEVICES. Owners or operators of closed-vent systems and control devices shall comply with s. NR 631.06 (2).

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.07 Alternative standards for valves in gas/vapor service or in light liquid service. (1) PERCENTAGE OF VALVES ALLOWED TO LEAK. (a) An owner or operator subject to the requirements of s. NR 632.06 (6) may elect to have all valves within a hazardous waste management unit comply with an alternative standard that allows no greater than 2% of the valves to leak.

(b) The following requirements shall be met if an owner or operator decides to comply with the alternative standard of allowing 2% of valves to leak:

1. An owner or operator shall notify the department that the owner or operator has elected to comply with the requirements of this section.

2. A performance test as specified in par. (c) shall be conducted initially upon designation, annually, and at other times requested by the department.

3. If a valve leak is detected, it shall be repaired in accordance with s. NR 632.06 (6) (d) and (e).

(c) Performance tests shall be conducted in the following manner:

1. All valves subject to the requirements in s. NR 632.06 (6) within the hazardous waste management unit shall be monitored within 1 week by the methods specified in s. NR 632.08 (2).

2. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

3. The leak percentage shall be determined by dividing the number of valves subject to the requirements in s. NR 632.06 (6) for which leaks are detected by the total number of valves subject to the requirements in s. NR 632.06 (6) within the hazardous waste management unit.

(d) If an owner or operator decides to no longer comply with this section, the owner or operator shall notify the department in writing that the work practice standard described in s. NR 632.06 (6) (a) to (e) will be followed.

(2) SKIP PERIOD LEAK DETECTION AND REPAIR. (a) 1. An owner or operator subject to the requirements of s. NR 632.06 (6) may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in par. (b) 2. and 3.

2. An owner or operator shall notify the department before implementing one of the alternative work practices.

(b) 1. An owner or operator shall comply with the requirements for valves, as described in s. NR 632.06 (6), except as described in subds. 2. and 3.

2. After 2 consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2%, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves subject to s. NR 632.06 (6).

3. After 5 consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2%, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves subject to s. NR 632.06 (6).

4. If the percentage of valves leaking is greater than 2%, the owner or operator shall monitor monthly in compliance with s. NR 632.06 (6), but may again elect to use

this section after meeting the requirements of s. NR 632.06 (6) (c) 1.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.08 Test methods and procedures. (1) Each owner or operator subject to the provisions of this chapter shall comply with the test methods and procedures requirements provided in this section.

(2) Leak detection monitoring, as required in ss. NR 632.06 (1) to 632.07 (2), shall comply with the following requirements:

(a) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.

Note: The publication containing the CFR reference may be obtained from:

Superintendent of Documents
U.S. Government Printing Office
PO Box 371954
Pittsburgh, PA 15250-7954
(202) 783-3238

The publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(b) The detection instrument shall meet the performance criteria of Reference Method 21.

(c) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(d) Calibration gases shall be:

1. Zero air.

2. A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(e) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(3) When equipment is tested for compliance with no detectable emissions, as required in s. NR 632.06 (1) (e), (2) (i), (3) and (6) (f), the test shall comply with the following requirements:

(a) The requirements of sub. (2) (a) to (d) shall apply.

(b) The background level shall be determined as set forth in Reference Method 21.

(c) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(d) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(4) In accordance with the waste analysis plan required by s. NR 630.13 (1), an owner or operator of a facility shall determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10% by weight using the following:

(a) Methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85;

Note: The publication containing this standard may be obtained from:

American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103

These publications are available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(b) Method 9060 or 8240 of SW-846; or

Note: The publication SW-846 may be obtained from:

National Technical Information Service
U.S. Department of Commerce
Springfield, Virginia 22161

This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(c) Application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced. Documentation of a waste determination by knowledge is required. Examples of documentation that shall be used to support a determination under this paragraph include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than 10%, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(5) If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10% by weight, this determination may be revised only after following the procedures in sub. (4) (a) or (b).

(6) When an owner or operator and the department do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10% by weight, the procedures in sub. (4) (a) or (b) may be used to resolve the dispute.

(7) Samples used in determining the percent organic content shall be representative of the highest total organic content hazardous waste that is expected to be contained in or contact the equipment.

(8) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86.

Note: The publication containing this standard may be obtained from:

American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103

This publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

(9) Performance tests to determine if a control device achieves 95 weight percent organic emission reduction shall comply with the procedures of s. NR 631.07 (3) (a) to (d).

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.09 Recordkeeping requirements. Each person subject to the requirements of this chapter shall comply with the recordkeeping requirements of this section.

(1) An owner or operator of more than one hazardous waste management unit subject to this chapter may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(2) Each person subject to this chapter shall record the following information in the facility operating record:

(a) For each piece of equipment to which ch. NR 632 applies:

1. Equipment identification number and hazardous waste management unit identification.

2. Approximate locations within the facility. The facility operating record shall identify the hazardous waste management unit on a facility plot plan.

3. Type of equipment.

Note: Examples of types of equipment include pump or pipeline valve.

4. Percent-by-weight total organics in the hazardous waste stream at the equipment.

5. Hazardous waste state at the equipment.

Note: Examples of hazardous waste state include gas, vapor or liquid.

6. Method of compliance with the standard.

Note: Examples of method of compliance with the standard include "monthly leak detection and repair" or "equipped with dual mechanical seals".

(b) For facilities that comply with the provisions of s. NR 631.06 (2) (a) 2., an implementation schedule as specified in s. NR 631.06 (2) (a) 2.

(c) Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in s. NR 631.08 (2) (c).

(d) Documentation of compliance with s. NR 632.06 (9), including the detailed design documentation or performance test results specified in s. NR 631.08 (2) (d).

(3) When each leak is detected as specified in s. NR 632.06 (1), (2), (6) and (7), the following requirements apply:

(a) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with s. NR 632.06 (7) (a) and the date the leak was detected, shall be attached to the leaking equipment.

(b) The identification on equipment, except on a valve, may be removed after it has been repaired.

(c) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in s. NR 632.06 (6) (c) and no leak has been detected during those 2 months.

(4) When each leak is detected as specified in s. NR 632.06 (1), (2), (6) and (7), the following information shall be recorded in an inspection log and shall be kept in the facility operating record:

(a) The instrument and operator identification numbers and the equipment identification number.

(b) The date evidence of a potential leak was found in accordance with s. NR 632.06 (7) (a).

(c) The date the leak was detected and the dates of each attempt to repair the leak.

(d) Repair methods applied in each attempt to repair the leak.

(e) "Above 10,000" if the maximum instrument reading measured by the methods specified in s. NR 632.08 (2) after each repair attempt is equal to or greater than 10,000 ppm.

(f) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(g) Documentation supporting the delay of repair of a valve in compliance with s. NR 632.06 (8) (c).

(h) The signature of the owner or operator, or the designate of the owner or operator whose decision it was that repair could not be effected without a hazardous waste management unit shutdown.

(i) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(j) The date of successful repair of the leak.

(5) Design documentation and monitoring, operating and inspection information for each closed-vent system and control device required to comply with the provisions of s. NR 632.06 (9) shall be recorded and kept up-to-date in the facility operating record as specified in s. NR 631.08 (3). Design documentation is specified in s. NR 631.08 (3) (a) and (b) and monitoring, operating and inspection information in s. NR 631.08 (3) (c) to (h).

(6) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser or carbon adsorption system, the department shall specify the appropriate recordkeeping requirements.

(7) The following information pertaining to all equipment subject to the requirements in s. NR 632.06 (1) to (9) shall be recorded in a log that is kept in the facility operating record:

(a) A list of identification numbers for equipment subject to the requirements of this section. Welded fittings are not equipment for purposes of this requirement.

(b) 1. A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of s. NR 632.06 (1) (e), (2) (i) and (6) (f).

2. The designation of this equipment as subject to the requirements of s. NR 632.06 (1) (e), (2) (i) or (6) (f) shall be signed by the owner or operator.

(c) A list of equipment identification numbers for pressure relief devices required to comply with s. NR 632.06 (3) (a).

(d) 1. The dates of each compliance test required in s. NR 632.06 (1) (e), (2) (i), (3) and (6) (f).

2. The background level measured during each compliance test.

3. The maximum instrument reading measured at the equipment during each compliance test.

(e) A list of identification numbers for equipment in vacuum service.

(8) The following information pertaining to all valves subject to the requirements of s. NR 632.06 (6) (g) and (h) shall be recorded in a log that is kept in the facility operating record:

(a) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.

(b) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(9) The following information shall be recorded in the facility operating record for valves complying with s. NR 632.07 (2):

(a) A schedule of monitoring.

(b) The percent of valves found leaking during each monitoring period.

(10) The following information shall be recorded in a log that is kept in the facility operating record:

(a) Criteria required in s. NR 632.06 (1) (d) 5.b. and (2) (e) 2. and an explanation of the design criteria.

(b) Any changes to these criteria and the reasons for the changes.

(11) The following information shall be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in s. NR 632.02 and other specific sections:

(a) An analysis determining the design capacity of the hazardous waste management unit.

(b) A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in s. NR 632.06 (1) to (9) and an analysis determining whether these hazardous wastes are heavy liquids.

(c) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in s. NR 632.06 (1) to (9). The record shall include supporting documentation as required by s. NR 632.08 (4) (c) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action, such as changing the process that produced the waste, that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in s. NR 632.06 (1) to (9), then a new determination is required.

(12) Records of the equipment leak information required by subs. (4) and (5) and the operating information required by sub. (5) need be kept only 3 years.

(13) The owner or operator of any facility that is subject to this chapter and to 40 CFR part 60, section VV, or 40 CFR part 61, section V, may elect to determine compliance with this chapter by documentation either pursuant to this section, or pursuant to those provisions of 40 CFR part 60 or 61, to the extent that the documentation under the regulation at 40 CFR part 60 or part 61 duplicates the documentation required under this section. The documentation under the regulation at 40 CFR part 60 or part 61 shall be kept with or made readily available with the facility operating record.

Note: The publication containing the CFR references may be obtained from:

Superintendent of Documents
U.S. Government Printing Office
PO Box 371954
Pittsburgh, PA 15250-7954
(202) 783-3238

The publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.10 Reporting requirements. (1) SEMIANNUAL REPORT. A person subject to this chapter shall submit a semiannual report to the department by dates specified by the department. The report shall include the following information:

(a) The EPA identification number, name and address of the facility.

(b) For each month during the semiannual reporting period:

1. The equipment identification number of each valve for which a leak was not repaired as required in s. NR 632.06 (6) (d).

2. The equipment identification number of each pump for which a leak was not repaired as required in s. NR 632.06 (1) (c) and (d) 6.

3. The equipment identification number of each compressor for which a leak was not repaired as required in s. NR 632.06 (2) (g).

(c) Dates of hazardous waste management unit shutdowns that occurred within the semiannual reporting period.

(d) For each month during the semiannual reporting period, dates when the control device installed as required by s. NR 632.06 (1), (2), (3) or (4) exceeded or operated outside of the design specifications as defined in s. NR 632.09 (5) and as indicated by the control device monitoring required by s. NR 632.06 (9) and was not corrected within 24 hours, the duration and cause of each exceedance and any corrective measures taken.

(2) If, during the semiannual reporting period, leaks from valves, pumps and compressors are repaired as re-

quired in s. NR 632.06 (1) (c), (d) 6, (2) (g) and (6) (d), and the control device does not exceed or operate outside of the design specifications as defined in s. NR 632.09 (5) for more than 24 hours, a report to the department is not required.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.

NR 632.11 Feasibility and plan of operation report requirements. A person subject to this chapter is required to submit the additional information described in this section when complying with s. NR 680.06.

(1) GENERAL REQUIREMENTS. The following requirements are in addition to the general feasibility and plan of operation report requirements in s. NR 680.06:

(a) A copy of the general inspection schedule required by s. NR 630.15. Include, where applicable, as part of the inspection schedule, specific requirements in ss. NR 631.06 (2), 632.06 (1), (2) and (7), 640.12 (1), 645.09, 645.11, 655.08 (1), 660.13 and 670.09.

(b) A description on how the following will be accomplished:

1. Mitigate effects of equipment failure and power outages;

2. Prevent undue exposure of personnel to hazardous waste; and

3. Prevent releases to atmosphere.

(2) PROCESS VENT INFORMATION REQUIREMENTS. Except as otherwise provided in ch. NR 630, owners and operators of facilities that have process vents to which ch. NR 631 applies shall provide the following additional information:

(a) For facilities that cannot install a closed-vent system and control device to comply with ch. NR 631 on the effective date that the facility becomes subject to the provisions of ch. NR 631, an implementation schedule as specified in s. NR 631.06 (2) (a) 2.

(b) Documentation of compliance with the process vent standards in s. NR 631.06 (1), including:

1. Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility, and the approximate location within the facility of each affected unit.

2. Information and data supporting estimates of vent emissions and emission reduction achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, estimates of vent emissions and emission reductions shall be made using operating parameter values, including temperatures, flow rates or concentrations, that represent the conditions that exist when the waste management unit is operating at the highest load or capacity level reasonably expected to occur.

3. Information and data used to determine whether or not a process vent is subject to the requirements of s. NR 631.06 (1).

(c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser or carbon adsorption system to comply with the requirements of s. NR 631.06 (1), and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in s. NR 631.08 (2) (c).

(d) Documentation of compliance with s. NR 631.06 (2), including:

1. A list of all information references and sources used in preparing the documentation.

2. Records, including the dates, of each compliance test required by s. NR 631.06 (2) (k) 1.

3. A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the department that present basic control device design information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in s. NR 631.08 (2) (d) 3.

Note: The publication APTI Course 415: Control of Gaseous Emissions, EPA Publication EPA-450/2-81-005, December 1981, may be obtained from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

The publication is available for inspection at the offices of the department, the secretary of state and the revisor of statutes.

4. A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

5. A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater unless the total organic emission limits of s. NR 631.06 (1) (a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent.

(3) EQUIPMENT LEAK INFORMATION REQUIREMENTS. Except as otherwise provided in ch. NR 630, owners and operators of facilities that have equipment to which ch. NR 632 applies shall provide the following additional information:

(a) For each piece of equipment to which ch. NR 632 applies:

1. Equipment identification number and hazardous waste management unit identification.

2. Approximate locations within the facility.

3. Type of equipment.

4. Percent by weight total organics in the hazardous waste stream at the equipment.

5. Hazardous waste state at the equipment.

6. Method of compliance with the standard.

(b) For facilities that cannot install a closed-vent system and control device to comply with this chapter on the date that the facility becomes subject to this chapter, an implementation schedule as specified in s. NR 631.06 (2) (a) 2.

(c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser or carbon adsorption system and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in s. NR 631.08 (2) (c).

(d) Documentation that demonstrates compliance with the equipment standards in s. NR 632.06 (1) to (8). This documentation shall contain the records required under s. NR 632.09. The department may request further documentation before deciding if compliance has been demonstrated.

(e) Documentation to demonstrate compliance with s. NR 632.06 (9) shall include the following information:

1. A list of all information references and sources used in preparing the documentation.

2. Records, including the dates, of each compliance test required by s. NR 631.06 (2) (j).

3. A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the department that present basic control device design information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in s. NR 631.08 (2) (d) 3.

Note: The publication APTI Course 415: Control of Gaseous Emissions, EPA Publication EPA-450/2-81-005, may be obtained from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

4. A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur.

5. A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater.

History: Cr. Register, May, 1995, No. 473, eff. 6-1-95.