

incident if the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use.

(c) The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately.

(d) The owner or operator shall record inspections in an inspection log or summary. These records shall be kept for at least 3 years from the date of inspection. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

(8) CLOSURE. (a) The owner or operator of a facility shall close the facility in a manner that:

1. Minimizes the need for further maintenance, and

2. Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post closure escape of wastes, leachate, contaminated rainfall, or waste decomposition products to ground or surface waters, or to the atmosphere.

3. Meets the additional closure requirements for landfills and surface impoundments as specified in s. NR 181.44 (12), if applicable.

(b) The facility operator shall submit to the department for approval a closure plan demonstrating compliance with this paragraph at the time of and as part of the application for a license under s. NR 181.53 or NR 181.55 and shall amend the plan whenever changes in operating plans or facility design affect the closure plan. The closure plan shall include, but not be limited to:

1. A description of how the facility shall be closed.

2. A description of possible uses of the land after closure.

3. The anticipated time until closing, the estimated time required for closure and any anticipated partial closures.

4. An estimate of the maximum inventory of wastes in storage or in treatment at any given time during the life of the facility.

5. A description of the steps needed to decontaminate facility structures or equipment.

(c) At least 120 days prior to the closing of a facility, the owner or operator shall notify the department in writing of the intent to close the site. No later than this date, the owner or operator shall notify current users of the facility of the intent to close the site.

(d) Within 60 days after ceasing to accept hazardous waste, all wastes shall be removed from storage and treatment operations and disposed of in accordance with requirements of subch. III and an approved closure plan as specified in par. (b).

(e) At completion of closure, all equipment and structures used in the operation of the facility shall be properly disposed of or decontaminated by removal of all hazardous waste and residues.

(f) At completion of closure, all required equipment shall be provided and arrangements shall be made to implement the long term care provisions contained in the approved plan of operation.

(g) At completion of closure, the owner or operator of a disposal facility shall submit to the department certification by the owner or operator and certification by a registered professional engineer that the facility has been closed in accordance with the requirements of this subchapter, the plan of operation and all applicable license conditions.

(9) LONG-TERM CARE. (a) The owner of a disposal facility shall provide long-term care for a period of 20 or 30 years from the date of closure, under s. 144.441, Stats., unless the owner's responsibility is terminated earlier in accordance with s. 144.441 (2) (d), Stats.

(b) Long-term care shall apply only to disposal facilities and consist of at least the following:

1. Monitoring and reporting in accordance with the requirements of s. NR 181.44 (11) and (12) (c).

2. Maintenance of facility monitoring and waste containment devices and security requirements necessary to prevent hazards to human health.

(c) The use of a site on or in which hazardous waste remains after closure shall never be allowed to disturb the integrity of the final cover, liner, or any other component of any containment system, or the facility's monitoring system, unless the owner or operator can demonstrate to the department that the disturbance:

1. Is necessary to the proposed use of the property and will not increase the potential hazard to human health or the environment; or

2. Is necessary to reduce a threat to human health or the environment.

(10) FINANCIAL REQUIREMENTS FOR CLOSURE AND LONG-TERM CARE. (a) *Applicability.* 1. Closure financial requirements in par. (b) are applicable to all hazardous waste storage, treatment and disposal sites and facilities. Technical requirements for the closure of these facilities are given in s. NR 181.42 (8) and, for specific types of facilities, in ss. NR 181.43 through 181.46.

2. Long-term care financial requirements in par. (c) apply only to disposal facilities. Technical requirements for the long-term care of disposal facilities are outlined in s. NR 181.44 (13).

3. Any person acquiring rights of ownership, possession or operation of a licensed hazardous waste facility other than a hazardous waste disposal facility shall be responsible for the closure of the site or facility and shall provide such assurance as is required by par. (b) prior to the issuance of a new operating license. Any person acquiring rights of ownership, possession or operation of a licensed hazardous waste disposal facility shall be responsible for the closure and long-term care of the site

or facility and shall provide such assurance as is required by pars. (b) and (c) prior to the issuance of a new operating license.

(b) *Closure requirements.* 1. The owner or operator shall provide proof of financial responsibility for closure of the facility as part of the initial license application. To provide proof of financial responsibility to assure compliance with the closure requirements of the plan of operation, the owner or operator shall either deposit into an escrow account or trust account, cash, certificates of deposit or government securities equal to the cost estimate for closure made in accordance with par. (d) 1.a., or utilize a bond or a deposit with the department, in an amount equal to the cost estimate for closure made in accordance with par. (d) 1.a. If the site or facility is to be closed in phases during the active site or facility life, the department shall not require proof of financial responsibility to assure compliance with the closure requirements in an amount exceeding that amount which will be necessary to complete closure of the most expensive phase to be closed.

2. As part of each license renewal application for the facility, the owner or operator shall submit proof of increased financial responsibility in accordance with pars. (d) 1.b. or (d) 1.c.

3. When an owner has completed closure of any portion of the site or facility other than a site or facility which is to be closed in phases over the active site or facility life, the owner may apply to the department for release of that portion of the bond or return of that amount of money held on deposit, in escrow, or in trust for closure of that portion of the site or facility. Such application shall be accompanied by an itemized list of costs incurred. Upon determination that a portion of the site or facility has been satisfactorily closed, the department shall authorize release of a portion of the funds or approve a reduction in the bond, provided however that the amount remaining shall not be reduced to less than 120% of the estimated cost to complete closure of the disposal facility. Upon determination by the department that complete closure has been accomplished, the department shall authorize release or return of all funds accumulated in such accounts or give written permission for cancellation of the bond. Such determination shall be concluded within 90 days of such application.

(c) *Long-term care requirements.* 1. To provide proof of financial responsibility to assure compliance with the long-term care provisions of the plan of operation, the owner shall either deposit into an escrow account or trust account an initial annual cash payment in the amount specified in par. (d) 2.a., or utilize a bond or a deposit with the department, in an amount equal to the initial annual payment as specified in par. (d) 2.a. The initial annual payment shall be made as part of the initial license application.

2. The owner or operator shall adjust the amount of the bond or each annual payment after the initial one by multiplying the amount of the previous year's payment or increase in bond value by the inflation factor calculated in accordance with par. (d) 2.d.

3. If a new long-term care cost estimate is prepared in accordance with par. (d) 2. c., the next annual payment or increase in bond value shall be calculated as follows:

a. Divide the adjusted long-term care cost estimate by the site-life in years.

b. Multiply the result by the number of payment periods to date.

c. From the result of subd. b. subtract the current total of payments made to date or total bond value. The result is the amount that shall be distributed over the remaining site-life.

d. Divide the result of subd. c. by the number of years of site-life remaining.

e. Add the result of subd. d. to the result of subd. a. to obtain the new annual payment or increase in bond value.

4. One year after closure and annually, thereafter, for the period of owner responsibility, the owner, who has carried out all necessary long-term care during the preceding year, may make application to the department for release from the escrow account, trust account, or deposit with the department or for reduction in the bond equal to the estimated costs for long-term care for that year. Such application shall be accompanied by an itemized list of costs incurred. Upon determination that the expenditures incurred are in accordance with the long-term care requirements anticipated in the approved plan of operation, the department shall authorize release of the funds or approve a reduction in the bond, provided however that the amount remaining shall not be reduced to less than 20% of the total cost of long-term care during the period of owner responsibility until termination of that responsibility pursuant to s. 144.441, Stats. Such determination shall be concluded within 90 days of such application. Any funds remaining in the escrow account, trust account, or on deposit with the department at the termination of owner responsibility shall be released to the owner within 90 days.

(d) *Cost estimates for closure and long-term care.* 1. Closure cost estimate. a. The estimate for closure cost shall equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure most expensive as indicated by its closure plan.

b. The owner or operator shall prepare a new closure cost estimate whenever a change in the closure plan affects the cost of closure.

c. During the month of May preceding each licensing period as specified in s. NR 181.55 (5) (b), the owner or operator shall adjust the latest closure cost estimate using an inflation factor derived from the annual implicit price deflator for gross national product as published by the U.S. department of commerce in its survey of current business. The inflation factor shall be calculated by dividing the latest published annual deflator by the deflator for the year during which the previous closure cost estimate was calculated. The result is the inflation factor. The adjusted closure cost estimate shall equal the latest closure cost estimate times the inflation factor.

2. Long-term care cost estimate. a. The long-term care cost for the site is calculated as follows. The estimate of the annual cost of long-term care is multiplied by either the 20 or 30 year period of responsibility, whichever was specified in the plan of operation for the site. The product is the long-term care cost of the site.

b. The initial annual payment or bond that is required under par. (c) to provide proof of financial responsibility to assure compliance with long-term care provision in the plan of operation shall be calculated as follows. The first annual payment or bond is equal to the long-term care cost of the site divided by the site life in years.

c. The owner or operator shall prepare a new annual long-term care cost estimate whenever a change in the long-term care aspect of the plan of operation affects the cost of long-term care.

d. During the month of May in each year following the initial long-term care payment, the owner or operator shall adjust the annual payment or bond using an inflation factor derived from the annual implicit price deflator for gross national product as published by the U.S. department of commerce in its survey of current business. The inflation factor shall be calculated by dividing the latest published annual deflator by the deflator for the previous year. The result is the inflation factor. The adjusted annual payment or increase in bond value for long-term care is equal to the previous annual payment or bond increase times the inflation factor.

(e) *Forms of financial assurance.* The owner or operator of a hazardous waste facility shall choose among the following options for establishing the financial assurance required under pars. (b) and (c).

1. Bonds. a. Bonds shall be issued by a surety company licensed to do business in this state. At the option of the owner or operator, a performance bond or a forfeiture bond may be filed. Surety companies may have the opportunity to complete the closure and long-term care of the site or facility in lieu of cash payment to the department. The obligee of the bond shall be the department.

b. Each bond shall provide that the bond shall not be cancelled by the surety company, except after not less than 90 days notice to the department in writing by registered or certified mail. Not less than 30 days prior to the expiration of the 90-day notice period, the owner or operator shall deliver to the department a replacement bond, in absence of which all hazardous waste storage, treatment, or disposal operations shall immediately cease. If the surety company's license to do business is revoked or suspended, the site or facility owner or operator shall, within 30 days after receiving written notice thereof, deliver to the department a replacement bond, in the absence of which all hazardous waste storage, treatment or disposal operations shall immediately cease.

2. Deposit. The owner or operator may deposit cash, certificates of deposit, or government securities with the department in the amount determined according to this subsection. Deposits placed with the department will be segregated and, if applicable, invested in an interest bearing account. The department shall have the right to use part or all of the funds to carry out the closure and long-term care requirements of the approved plan of operation if the owner or operator fails to do so. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner or operator. If the owner or operator requests a hearing in writing within 60 days thereafter, the department shall prior to using the funds, hold a hearing pursuant to s. 227.064, Stats., for the purpose of determining whether or not the clo-

sure and long-term care requirements of the approved plan or operation have been carried out.

3. **Escrow account.** The owner or operator may establish an escrow account with a bank licensed to do business in this state in the amount determined according to this subsection. The escrow account shall consist of cash, certificates of deposit, or governmental securities. The department shall be a party to the escrow agreement, which shall provide that there shall be no withdrawals from the escrow account except as authorized in writing by the department. The escrow agreement shall further provide that the department shall have the right to withdraw and use part or all of the funds in the escrow account to carry out the closure and long-term care requirements of the approved plan of operation if the owner or operator fails to do so. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner or operator. If the owner or operator requests a hearing in writing within 60 days thereafter, the department shall prior to using the funds, hold a hearing pursuant to s. 227.064, Stats., for the purpose of determining whether or not the closure and long-term care requirements of the approved plan of operation have been carried out.

4. **Irrevocable trust.** The owner or operator may create an irrevocable trust exclusively for the purpose of ensuring that the owner and any successor in interest will comply with the closure and long-term care requirements of the approved plan of operation. The trust agreement shall designate a bank licensed to do business in this state as trustee and the department as sole beneficiary. The trust corpus shall consist of cash, certificates of deposit or government securities in the amount determined according to this subsection. The trust agreement shall further provide that sufficient monies shall be paid from the trust fund to the beneficiary in the event that the owner or any successor in interest fails to complete closure and long-term care requirements of the approved plan of operation. A copy of the trust agreement shall be submitted to the department for approval prior to issuance of the initial license. The department shall mail notification of its intent to use funds to the last known address of the owner or operator. If the owner or operator requests a hearing in writing within 60 days thereafter, the department shall prior to using the funds, hold a hearing pursuant to s. 227.064, Stats., for the purpose of determining whether or not the closure and long-term care requirements of the approved plan of operation have been carried out.

(f) *Access and default.* Whenever on the basis of any reliable evidence and after opportunity for a hearing, the department determines that an owner or operator of a hazardous waste site or facility is in violation of any of the requirements for closure or for long-term care monitoring and maintenance in s. NR 181.42 (8) and (9), the department shall have the right to enter upon the facility and carry out the closure or the post-closure monitoring and maintenance requirements.

(11) **FACILITY LIABILITY REQUIREMENTS.** The owner or operator of a hazardous waste facility or group of facilities shall have and maintain liability insurance from an insurer licensed or eligible to insure facilities in the jurisdiction where the facilities are located, for sudden and accidental occurrences in the amount of \$1 million per occurrence with an annual aggregate per firm of \$2 million, exclusive of legal defense costs,

for claims arising out of injury to persons or property from the operations of each such hazardous waste facility or group of facilities. The deductible written into the insurance policy shall not exceed 5% of the per incident limit of liability of the policy.

(12) **WASTE MANAGEMENT FUND.** (a) *Payment into the fund.* All owners or operators of licensed hazardous waste disposal facilities shall pay to the department the fees specified in par. (c), for each ton of hazardous waste received and disposed of at the site from the effective date of these rules until the site is closed and no longer receives waste, except as otherwise provided in s. 144.441 (3) (a), Stats. The department shall deposit all such fees into the waste management fund provided for in s. 25.45, Stats.

(b) *Certification.* The owner or operator of a licensed hazardous waste disposal facility shall certify, on a form provided by the department, the amount of hazardous waste received and disposed of during the preceding reporting period. The department shall specify the term of the reporting period on the certification form. The certification form shall be completed and returned to the department with the appropriate fee within 30 days after mailing of the form by the department to the owner or operator.

(c) *Fees.* 1. For all disposal facilities with an approved plan of operation the owner may choose to be responsible for the long-term care of the facility for either 20 years or 30 years after site closure. The fees to be paid into the fund shall be at a rate of payment of 35¢ per ton for 20-year responsibility and 15¢ per ton for 30-year responsibility, except for ashes or sludges from electric or process steam generating facilities, sludges produced by waste treatment or manufacturing processes at pulp or paper mills, manufacturing process solid wastes from foundries, or sludges produced by municipal wastewater treatment facilities for which the rate of payment shall be 3.5¢ per ton for 20-year responsibility and 1.5¢ per ton for 30-year responsibility.

2. For all disposal facilities without an approved plan of operation, the fees to be paid shall be those indicated in subd. 1. at the 30-year responsibility rate of payment.

(d) *Use of fund.* Only facilities with an approved plan of operation are eligible for use of the money accumulated in the waste management fund. The owner or operator of any hazardous waste disposal site or facility in existence on the effective date of these rules shall be required to seek approval of a plan of operation before an operating license is issued. The monies in the waste management fund shall be expended exclusively as set forth in s. 144.441 (3) (g), Stats.

**History:** Cr. Register, July, 1981, No. 307, eff. 8-1-81.

**NR 181.43 Storage standards.** (1) **GENERAL.** Except as otherwise provided in sub. (2), no person shall maintain or operate a hazardous waste storage facility unless the person has obtained an interim license or an operating license from the department, in accordance with the requirements of s. NR 181.53 or s. NR 181.55.

(2) **EXEMPTIONS.** (a) A generator may accumulate hazardous waste on-site without a storage license for 90 days or less provided that:

1. Within 90 days, all such waste is either:
  - a. Shipped off-site to a designated facility which meets the requirements of s. NR 181.23 (2) (b); or
  - b. Treated, stored or disposed of in an on-site facility that is either licensed under subch. VI or exempt from licensing under s. NR 181.42 (1) (a).
2. The waste is placed in containers which meet the packaging requirements of s. NR 181.26 (1) and are managed in accordance with sub. (6) (a) and sub. (8) except for sub. (8) (d), or is placed in tanks, provided the generator complies with sub. (6), with the exception of subs. (6) (c) and (6) (d), and sub. (7), with the exception of sub. (7) (f);
3. The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container or tank;
4. Each container is properly labeled and marked according to s. NR 181.26 (2) and (3); and
5. The generator complies with the contingency plan, security and personnel training requirements for owners and operators specified in s. NR 181.42 (4) and (5).

(b) The owner or operator of industrial wastewater facilities, sewerage systems and waterworks treating liquid wastes which are approved under s. 144.04, Stats., or permitted under ch. 147, Stats., are exempt from all the requirements of this section, except that this exemption does not apply to the storage or disposal of sludges or other hazardous waste produced during the treatment process.

(c) The owner or operator of a solid waste disposal site or facility licensed under ch. NR 180, Wis. Adm. Code, provided that the only hazardous waste the facility stores is excluded from regulation under this subchapter by s. NR 181.13 and the facility has been approved under s. NR 181.13 (7) to accept small quantities of hazardous waste.

(d) The owners or operators of facilities used for the storage of materials resulting from a mining operation as defined in s. 144.81 (5), Stats., except where requirements in this section are referenced in the rules adopted by the department under s. 144.435 (1m), Stats.

(3) FEASIBILITY REPORT. (a) Unless specifically exempted in sub. (2), no person shall establish, construct or expand a hazardous waste storage facility or be issued an initial operating license under s. NR 181.55 without first obtaining written approval of a feasibility report and subsequently obtaining approval of a plan of operation from the department. The purpose of the feasibility report is to determine whether the site has potential for use as a hazardous waste storage facility and to identify any conditions which the applicant shall include in the plan of operation. Favorable feasibility determination does not guarantee plan of operation approval and licensure. The feasibility report shall be submitted in accordance with the requirements of s. NR 181.51 and shall contain the applicable material required by s. NR 181.44 (6). The applicant is encouraged to submit an initial site report as outlined in s. NR 181.44 (5). The department may waive in writing any of the complete feasibility report requirements specified in s. NR 181.44 (6). Feasibility report re-