

2. The current waste types, sources, and volumes of solid wastes being deposited at the site.

3. The cumulative volumes of waste which were applied to the site during active operations.

4. The reasons and/or intent for closing the site.

5. The proposed future land uses of those areas previously used for waste deposition.

6. Special precautions to be utilized, if appropriate, to limit access to the facility, and to insure that no further solid waste materials are deposited after the closure date.

7. The proposed site closure, site monitoring, and long-term care procedures to be implemented following site closure. These procedures shall be in accordance with the approved solid waste land spreading plan or any proposed modifications to the plan.

8. The alternate licensed sites or approved facilities to be utilized for waste disposal and/or land spreading purposes following closure of the facility.

(b) The department will review the notice of intent to close the facility and will approve or disapprove in writing the proposed closure procedures. The department may require additional information, or may require additional closure, maintenance, and/or long-term care procedures to be implemented to insure proper closure of the site.

1. If the facility to be closed was initially licensed under this section, site closure, maintenance, and long-term care procedures shall be conducted in accordance with the approved solid waste land spreading plan unless subsequently modified, or unless otherwise specified by the department.

2. If the facility to be closed was not initially licensed under this section, a final site closure and long-term care and monitoring plan shall be prepared and submitted to the department for approval as part of the notice of intent for site closure.

(c) No person shall deposit any solid waste materials at a closed site without the prior written authorization of the department, and the approval of the site owner.

(d) Within 90 days of the final closure date of a site, all closure work shall be completely and finally performed in accordance with this subsection.

(e) Complete and proper final closure of a land spreading site may include, but not be limited to, the following:

1. Discing, plowing, or otherwise incorporating all deposited solid waste materials into the surface soil layers, or covering all land spreading areas with an adequate thickness of final earth cover material.

2. Providing for the control of surface water runoff to minimize adverse effects on surface and/or groundwater quality.

3. Establishing a vegetative cover to promote evapotranspiration and to control soil erosion, and/or otherwise preparing the land surface for the intended future land use.

4. Continuing to grow crops and conducting the associated monitoring work.

5. Performing the required environmental monitoring work associated with the approved final closure and long-term care plans.

(f) The department shall require long-term care as defined in s. 144.441, Stats., only of licensed land spreading facilities for which waste management fund monies may be expended in accordance with s. 144.44(3), Stats. The department may require the following provisions:

1. Erosion control and maintenance of vegetation.
2. Control of surface drainage.
3. Ground and/or surface water quality monitoring.
4. Gas monitoring.
5. Soils and/or crop testing programs.
6. The preparation and submittal of monitoring data and/or reports.

(8) WASTE MANAGEMENT FUND. Land spreading sites and facilities which are exempt from licensing are not required to contribute to the waste management fund.

(9) PUBLIC PARTICIPATION. For sites requiring approval of a solid waste land spreading plan, the department prior to approval shall prepare an environmental impact assessment screening worksheet and provide opportunity for public comment according to the procedures established in ch. NR 150, except that the notice shall be published as a class 1 notice under ch. 985, Stats. The department shall hold a hearing on the proposed land spreading plan if a written request for a hearing is filed by any county, city, village or town, or by any 6 persons within 30 days from the time the notice is published. A hearing under this subsection shall be held within 60 days after receipt of the request and shall be conducted as provided in s. 227.022, Stats. The hearing shall be held in an appropriate place designated by the department in one of the counties, cities, villages or towns which could be affected by the operation of a proposed site.

(10) Prior to licensing a site, the owner or operator shall submit proof that a notation of the existence of the site has been recorded in the office of the register of deeds in each county in which a portion of the site is located.

History: Cr. Register, February, 1980, No. 290, eff. 3-1-80; renum. (2) (a) 10. to be 11. and am., cr. (2) (a) 10., Register, January, 1983, No. 325, eff. 2-1-83.

NR 180.15 Financial responsibility for closure and long-term care. (1) DEFINITIONS. (a) "Actual dollar inpayments" means equal annual payments made by the facility owner into a long-term care account.

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(b) "Certificate of deposit" means a certificate issued by a bank or financial institution acknowledging receipt of a specified sum of money in a special kind of time deposit, drawing interest and requiring written notice for withdrawal.

(c) "Closure period" means the 90 day period after the facility ceases to accept waste, unless otherwise specified in the approved plan of operation.

(d) "Equal annual outpayments" means estimated payments for long-term care which are the same amount in each year of the period of owner responsibility for the long-term care of the facility.

(e) "Interest bearing accounts" means escrow accounts, trust accounts or cash deposits with the department.

(f) "Non-interest bearing accounts" means letters of credit, performance bonds or forfeiture bonds.

(g) "Real dollar inpayments" means payments made by the facility owner, which increase each year at the rate of inflation, into a long-term care account.

(h) "Unequal annual outpayments" means estimated payments for long-term care which are higher in the early years of the period of owner responsibility for long-term care than they are later in the long-term care period after the facility has stabilized.

(i) "U.S. government securities" includes treasury bills, treasury bonds, treasury certificates, treasury notes, and treasury stocks guaranteed by the federal government.

(2) **APPLICABILITY.** (a) *Closure.* 1. The owner of a facility for the land disposal of solid waste which is approved and licensed after May 20, 1978, or which was initially licensed between May 21, 1975 and May 20, 1978 and whose owner successfully applied before May 21, 1980 for a determination that the facility's design and plan of operation comply substantially with the requirements of this chapter, shall submit, as part of the initial operating license application and annually thereafter for the period of active facility life, proof of financial responsibility to ensure compliance with the closure requirements of the facility's approved plan of operation.

2. The owner of a commercial PCB waste storage or treatment facility established or constructed after May 6, 1982 shall submit as part of the initial operating license application and annually thereafter for the period of active facility life, proof of financial responsibility to ensure compliance with the closure requirements of the facility's approved plan of operation.

(b) *Long-term care.* 1. The owner of a facility for the land disposal of solid waste which is approved and licensed after May 20, 1978, or which was initially licensed between May 21, 1975, and May 20, 1978, and whose owner successfully applied before May 21, 1980, for a determination by the department that the facility's design and plan of operation comply substantially with the requirements of this chapter, shall be responsible for the long-term care of the facility for either 20 or 30 years after facility closure, unless the owner's responsibility is terminated ear-

lier in accordance with s. 144.441 (2) (d), Stats. An owner responsible for long-term care shall specify at the time of submittal of the plan of operation whether the owner chooses to be responsible for 20 years, subject to department approval or 30 years and shall submit, as part of the initial operating license application and annually thereafter for the period of active facility life, proof of financial responsibility to ensure compliance with the long-term care requirements of the plan of operation.

2. The owner of a commercial PCB waste storage or treatment facility established or constructed after May 6, 1982 shall submit as part of the initial operating license application and annually thereafter for the period of active facility life, proof of financial responsibility to ensure compliance with the long-term care requirements of the facility's approved plan of operation. The department may waive any requirement for long-term care proof of financial responsibility.

(c) *Successors in interest.* Any person acquiring rights of ownership, possession or operation of a licensed facility shall be subject to all requirements of the license for the facility and shall provide any required proof of financial responsibility to the department in accordance with this section. The previous owner is responsible for closure and long-term care, and shall maintain any required proof of financial responsibility, until the person acquiring ownership, possession or operation of the facility establishes any required proof of financial responsibility.

(3) **METHODS OF PROVIDING PROOF OF FINANCIAL RESPONSIBILITY.** Financial assurances for closure and long-term care shall be established separately. The owner shall specify, as part of the plan of operation submittal, which method of providing proof of financial responsibility will be used for closure and for long-term care. To provide proof of financial responsibility, the applicant shall use one of the following methods for each account:

(a) *Performance or forfeiture bond.* 1. If the owner chooses to submit a bond, it shall be in the amount determined according to sub. (5) (b) conditioned upon faithful performance by the owner and any successor in interest, of all closure or long-term care requirements of the approved plan of operation. The bond shall be delivered to the department as part of the initial operating license application. Bond forms shall be supplied by the department.

2. Bonds shall be issued by a surety company authorized to do surety business in this state. At the option of the owner a performance bond or a forfeiture bond may be filed. The department shall be the obligee of the bond. Surety companies may have the opportunity to complete the closure or long-term care of the facility in lieu of cash payment to the department if the owner or any successor in interest fails to carry out the closure or long-term care requirements of the approved plan of operation. The department shall mail notification of its intent to use the funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation have been carried out.

3. Each bond shall provide that, as long as any obligation of the owner for closure or long-term care remains, the bond may not be cancelled by the surety, unless a replacement bond or other proof of financial responsibility under this section is provided to the department by the owner. If the surety proposes to cancel such a bond, the surety shall provide notice to the department in writing by registered or certified mail not less than 90 days prior to the proposed cancellation date. Not less than 30 days prior to the expiration of the 90-day notice period, the owner shall deliver to the department a replacement bond or other proof of financial responsibility under this section, in the absence of which all disposal operations shall immediately cease and the bond shall remain in effect as long as any obligation of the owner remains for closure or long-term care.

4. If the surety company becomes bankrupt or insolvent or if its authorization to do business is revoked or suspended, the owner shall, within 30 days after receiving written notice, deliver to the department a replacement bond or other proof of financial responsibility under this section in the absence of which all disposal operations shall immediately cease and the bond shall remain in effect as long as any obligation of the owner remains for closure or long-term care.

(b) *Deposit with the department.* An owner may deposit cash, certificates of deposit, or U.S. government securities with the department, the amount of the deposit shall be determined according to sub. (5) (a) and shall be submitted as part of the initial license application. Cash deposits placed with the department shall be segregated and invested in an interest bearing account. All interest payments shall be accumulated in the account. The department shall have the right to use part or all of the funds to carry out the closure or long-term care requirements of the approved plan of operation if the owner 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. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation have been carried out.

(c) *Escrow account.* If the owner establishes an escrow account, it shall be with a bank or financial institution located within the state of Wisconsin which is examined and regulated by the state or a federal agency in the amount determined according to sub. (5) (a). The assets in the escrow account shall consist of cash, certificates of deposit, or U.S. government securities. All interest payments shall be accumulated in the account. A duplicate original of the escrow agreement with original signatures shall be submitted to the department as part of the initial operating license application. Escrow account forms shall be supplied by the department. 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 or long-term care requirements of the approved plan of operation if the owner 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. If the owner submits a written request for a

hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation have been carried out.

(d) *Irrevocable trust.* If the owner creates an irrevocable trust, it shall be exclusively for the purpose of ensuring that the owner or any successor in interest will comply with the closure or long-term care requirements of the approved plan of operation. The trust agreement shall designate the department as sole beneficiary. The trustee shall be a bank or other financial institution located within the state of Wisconsin which has the authority to act as a trustee and whose trust operations are regulated and examined by the state or a federal agency. The trust corpus shall consist of cash, certificates of deposit or U.S. government securities in the amount determined according to sub. (5) (a). All interest payments shall be accumulated in the account. A duplicate original of the trust agreement with original signatures shall be submitted to the department for approval as part of the initial operating license application. Trust forms shall be supplied by the department. The trust agreement shall provide that there shall be no withdrawal from the trust fund except as authorized in writing by the department. 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 the closure or long-term care requirements of the approved plan of operation. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation have been carried out.

(e) *Letter of credit.* 1. If the owner chooses to submit a letter of credit, it shall be in the amount determined according to sub. (5) (b) conditioned upon faithful performance by the owner and any successor in interest, of all closure or long-term care requirements of the approved plan of operation. The original letter of credit shall be delivered to the department as part of the initial operating license application. Letter of credit forms shall be supplied by the department.

2. Letters of credit shall be issued by a bank or financial institution which is examined and regulated by a federal agency, or in the case of a bank or financial institution located within the state of Wisconsin, which is examined and regulated by the state or a federal agency. The department shall be the beneficiary of the letter of credit.

3. Each letter of credit shall provide that as long as any obligation of the owner for closure or long-term care remains, the letter of credit may not be cancelled by the bank or financial institution, unless a replacement letter of credit or other proof of financial responsibility under this section is provided to the department by the owner. If the bank or financial institution proposes to cancel a letter of credit, the bank or financial institution shall provide notice to the department in writing by registered or certified mail not less than 90 days prior to the proposed cancellation date. Not less than 30 days prior to the expiration date of the 90-

day notice period, the owner shall deliver to the department a replacement letter of credit or other proof of financial responsibility under this section, in the absence of which all disposal operations shall immediately cease and the letter of credit shall remain in effect as long as any obligation of the owner remains for closure or long-term care.

4. If the bank or financial institution becomes bankrupt or insolvent or if its authorization to do business is revoked or suspended, the owner shall, within 30 days after receiving written notice, deliver to the department a replacement letter of credit or other proof of financial responsibility under this section, in the absence of which all disposal operations shall immediately cease and the letter of credit shall remain in effect as long as any obligation of the owner remains for closure or long-term care.

5. The letter of credit shall further provide that the department shall have the right to withdraw and use part or all of the funds to carry out the closure or long-term care requirements of the plan of operation if the owner fails to do so. The department shall mail notification of its intent to use the funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department, within 20 days after the mailing of the notification, the department shall prior to using the funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation have been carried out.

(f) *Net worth test.* 1. Only a company that meets the definition in s. 144.443 (1) (b), Stats., may use the net worth method of providing proof of financial responsibility.

2. The owner shall comply with the net worth test requirements of s. 144.443 (4) and (6) or (7), Stats., and the minimum security requirements of s. 144.443 (8) or (9), Stats., whichever is applicable.

3. Companies using the net worth test to provide proof of financial responsibility for more than one facility shall use the total cost of compliance for all facilities in determining the net worth to closure and long-term care cost ratio.

4. The department determinations under the net worth test shall be done in accordance with s. 144.443 (5), Stats.

(g) *Insurance.* 1. If the owner chooses to submit an insurance policy for closure or long-term care, it shall be issued for the maximum risk limit determined according to sub. (5) (c). A certificate of insurance shall be delivered to the department as part of the initial operating license application. Certificate of insurance forms shall be supplied by the department.

2. At a minimum, the agent or broker shall be licensed as a surplus lines insurance agent or broker. The department shall determine the acceptability of a surplus lines insurance company to provide coverage for proof of financial responsibility. The department shall base the determinations on any evaluations prepared in accordance with s. 618.41 (6) (d), Stats., by the office of the commissioner of insurance. The department shall be the beneficiary of the insurance policy.

3. The insurance policy shall provide that, as long as any obligation of the owner for closure or long-term care remains, the insurance policy

may not be cancelled by the insurer unless a replacement insurance policy or other proof of financial responsibility under this section is provided to the department by the owner. If the insurer proposes to cancel an insurance policy, the insurer shall provide notice to the department in writing by registered or certified mail not less than 90 days prior to the proposed cancellation date. Not less than 30 days prior to the expiration of the 90-day notice period, the owner shall deliver to the department a replacement insurance policy or other proof of financial responsibility under this section, in the absence of which all disposal operations shall immediately cease and the policy shall remain in effect as long as any obligation of the owner remains for closure or long-term care.

4. If the insurance company becomes bankrupt or insolvent or if the company receives an unfavorable evaluation under s. 618.41 (6) (d), Stats., the owner shall, within 30 days after receiving written notice, deliver to the department a replacement insurance policy or other proof of financial responsibility under this section in the absence of which all disposal operations shall immediately cease and the policy shall remain in effect as long as any obligation of the owner remains for closure or long-term care.

5. The insurance policy shall further provide that funds, up to an amount equal to the maximum risk limit of the policy, will be available to the department to carry out the closure and long-term care requirements of the approved plan of operation if the owner fails to do so. The department shall mail notification of its intent to use the funds for that purpose to the last known address of the owner. If the insurer or owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using funds, hold a hearing for the purpose of determining whether or not the closure or long-term care requirements of the approved plan of operation have been carried out.

6. Each insurance policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditioned upon the consent of the insurer, provided such consent is not unreasonably refused.

Note: These forms may be obtained from the Department of Natural Resources, Bureau of Solid Waste Management, P.O. Box 7921, Madison, Wisconsin 53707 or any District Office.

(h) *Other methods.* The department shall consider other financial commitments made payable to or established for the benefit of the department to ensure the owner or operator will comply with the closure and long-term care requirements of the approved plan of operation. The department shall review the request of any owner or operator to establish proof of financial responsibility to determine whether the proposed method provides a degree of assurance that is comparable to that provided by the methods listed in this section. The owner shall submit the request and all supporting information as part of the plan of operation.

(4) **COST ESTIMATES.** (a) For the purpose of determining the amount of proof of financial responsibility that is required in sub. (3), the owner shall estimate the total cost of closure for the point in time in the facility's operation when the extent and manner of its operation make closure most expensive, estimate the annual cost of long-term care of the facility for the period of owner responsibility and submit the estimated closure

and long-term care costs together with all necessary justification to the department for approval as part of the plan of operation submittal. The costs shall be based on a third party performing the work and reported on a per unit basis. The source of estimates shall be indicated.

(b) At a minimum, closure costs shall include cover material, topsoil, seeding, fertilizing, mulching and labor.

(c) At a minimum, long-term care costs shall include land surface care; gas monitoring; leachate pumping, transportation, monitoring and treatment; and groundwater monitoring, collection and analysis.

(d) The estimated rate of inflation shall be the latest percent change in the annual gross national product implicit price deflator published in the survey of current business by the bureau of economic analysis, U.S. department of commerce.

(e) The estimated annual rate of interest shall be the rate specified by the financial institution managing the fund or deposit.

(5) FORMULAS FOR CALCULATING THE AMOUNT OF THE PROOF OF FINANCIAL RESPONSIBILITY. The owner shall, as part of the plan of operation submittal, perform the calculation of the formula for the chosen method of providing proof of financial responsibility for closure and for long-term care.

(a) *Deposits in escrow, trust or department accounts.* 1. Interest bearing accounts for closure. The formula for closure shall be:

$$D = C \frac{(1 + f)}{(1 + i)}$$

in which:

D = unknown deposit for closure

C = the estimated cost of closure in today's dollars for the maximum area to be open at any point in time

f = the estimated annual rate of inflation

i = the estimated annual rate of interest

2. 'Interest for long-term care.' a. The following information used in calculating the amounts deposited to the long-term care account shall be specified in the plan of operation submittal: the rate of outpayment during the period of long-term care, expressed in equal annual outpayments or unequal annual outpayments, and the equal annual rate of inpayment, expressed as either real dollar inpayments or actual dollar inpayments.

b. When equal annual outpayments, actual dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[R (1 + f)^{SL} \frac{(1 + f)^c}{(1 + i)^c} \left[\frac{1 - \left(\frac{1 + f}{1 + i} \right)^{LTC}}{\left(\frac{1 + f}{1 + i} \right) - 1} \right] \right] \div \left[(1 + i) \left[\frac{(1 + i)^{SL} - 1}{i} \right] \right]$$

c. When equal annual outpayments, actual dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[R (1 + f)^{SL} \left[\frac{1 - \left(\frac{1 + f}{1 + i} \right)^{LTC}}{\left(\frac{1 + i}{1 + f} \right) - 1} \right] \right] \div \left[(1 + i) \left[\frac{(1 + i)^{SL} - 1}{i} \right] \right]$$

d. When unequal annual outpayments, actual dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[\sum_x \left[R_x (1 + f)^{SL} \left(\frac{1 + f}{1 + i} \right)^{x + c} \right] \right] \div \left[(1 + i) \left[\frac{(1 + i)^{SL} - 1}{i} \right] \right]$$

e. When unequal annual outpayments, actual dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[\sum_x \left[R_x (1 + f)^{SL} \left(\frac{1 + f}{1 + i} \right)^x \right] \right] \div \left[(1 + i) \left[\frac{(1 + i)^{SL} - 1}{i} \right] \right]$$

f. When equal annual outpayments, real dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[R (1 + f)^{SL} \left(\frac{1 + f}{1 + i} \right)^c \left[\frac{1 - \left(\frac{1 + f}{1 + i} \right)^{LTC}}{\left(\frac{1 + i}{1 + f} \right) - 1} \right] \right] \div \left[(1 + i)^{SL + 1} \left[\frac{1 - \left(\frac{1 + f}{1 + i} \right)^{SL}}{i - f} \right] \right]$$

g. When equal annual outpayments, real dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[R (1 + f)^{SL} \left[\frac{1 - \left(\frac{1 + f}{1 + i} \right)^{LTC}}{\left(\frac{1 + i}{1 + f} \right) - 1} \right] \right] \div \left[(1 + i)^{SL + 1} \left[\frac{1 - \left(\frac{1 + f}{1 + i} \right)^{SL}}{i - f} \right] \right]$$

h. When unequal annual outpayments, real dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[\sum \left[R_x (1+f)^{SL} \left(\frac{1+f}{1+i} \right)^{x+c} \right] \right] \div \left[(1+i)^{SL+1} \left[\frac{1 - \left(\frac{1+f}{1+i} \right)^{SL}}{i-f} \right] \right]$$

i. When unequal annual outpayments, real dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[\sum \left[R_x (1+f)^{SL} \left(\frac{1+f}{1+i} \right)^x \right] \right] \div \left[(1+i)^{SL+1} \left[\frac{1 - \left(\frac{1+f}{1+i} \right)^{SL}}{i-f} \right] \right]$$

In which:

A = the unknown inpayment for long-term care per year of active facility life

i = the estimated annual rate of interest

f = the estimated annual rate of inflation

SL = the estimated active life of the facility in years

R = the estimated annual costs

R_x = the estimated unequal annual costs

x = the year of long-term care

LTC = the period of long-term care

c = the closure period as a fraction of one year

Σ = the sum from year 1 through the last year of LTC

(b) *Bonds and letters of credit.* 1. 'Non-interest bearing accounts for closure.' The formula for closure shall be:

$$CB = C (1 + f)$$

in which:

CB = the unknown amount of the bond or letter of credit for closure

C = the estimated closure cost

f = the estimated annual rate of inflation

2. Non-interest bearing accounts for long-term care. a. The rate of outpayment shall be as specified in sub. (5) (a) 2., and the rate of inpayment shall be in equal actual dollar inpayments.

When equal annual outpayments are used, the formula shall be:

$$PB = \left[R (1 + f)^{SL + 1 + c} \left[\frac{(1 + f)^{LTC} - 1}{f} \right] \right] \div SL$$

When unequal annual outpayments are used, the formula shall be:

$$PB = \left[\sum \left[R_x (1 + f)^{SL + x + c} \right] \right] \div SL$$

in which:

PB = the unknown bond or letter of credit amount for long-term care to increase per year of active facility life

f = the estimated annual rate of inflation

SL = the estimated active life of the facility in years

R = the estimated annual costs

R_x = the estimated unequal annual costs

LTC = the long-term care period

x = the year of long-term care

c = the closure period as a fraction of one year

Σ = the sum from year 1 through the last year of LTC

(c) *Insurance*. 1. Closure. The formula shall be:

$$C1 = C(1 + f)$$

in which:

C1 = the unknown amount of the closure insurance

C = the estimated closure cost

f = the estimated annual rate of inflation

2. Long-term care. a. The rate of outpayment shall be as specified in sub. (5) (a) 2.

When equal annual outpayments are used, the formula shall be:

$$INS = \left[R (1 + f)^{SL+1+c} \left[\frac{(1 + f)^{LTC-1}}{f} \right] \right]$$

When unequal annual outpayments are used, the formula shall be:

$$INS = \left[\Sigma \left[R_x (1 + f)^{SL+x+c} \right] \right]$$

in which:

INS = the unknown amount of the long-term care insurance

f = the estimated annual rate of inflation

SL = the estimated active life of the facility in years

R = the estimated annual costs

R_x = the estimated unequal annual costs

LTC = the long-term care period

x = the year of long-term care

c = the closure period as a fraction of a year

Σ = the sum of year 1 through the last year of LTC

(6) **CHANGING METHODS OF PROOF OF FINANCIAL RESPONSIBILITY.** The owner of a solid waste land disposal facility or a commercial PCB storage or treatment facility may change from one method of providing proof of financial responsibility under sub. (3) to another, but not more than once per year. A change may only be made on the anniversary of the submittal of the original method of providing proof of financial responsibility.

(7) **ADJUSTMENT OF FINANCIAL RESPONSIBILITY.** The owner of a facility for the land disposal of solid waste or the commercial storage or treatment of PCB waste shall prepare a new closure cost estimate whenever a substantial change in the closure plan affects the cost of closure and a new long-term care cost estimate whenever a substantial change in the long-term care requirements in the approved plan of operation affects the cost of long-term care. Proof of the increase in the amount of all bonds, letters of credit, escrow accounts and trust accounts, or other approved methods established under this section shall be submitted annually to the department. The department may adjust the amount of the required proof of financial responsibility for closure or long-term care based upon prevailing or projected interest and inflation rates and the latest cost estimates, and may annually require the owner to adjust the amount of proof of financial responsibility accordingly.

(8) **ACCESS AND DEFAULT.** Whenever on the basis of any reliable information, and after opportunity for a hearing, the department determines that an owner or operator of a solid waste land disposal facility or a commercial PCB storage or treatment facility is in violation of any of the requirements for closure or long-term care specified in the approved plan of operation, the department and its designees shall have the right to

enter upon the facility and carry out the closure or long-term care requirements. The department may use part or all of the money deposited with it, or the money deposited in escrow or trust accounts, or performance or forfeiture bonds, or letters of credit, or funds accumulated under other approved methods to carry out the closure or long-term care requirements.

(9) **AUTHORIZATION TO RELEASE FUNDS.** (a) *Closure.* When an owner or operator has completed closure, the owner may apply to the department for release of the bond, insurance or the letter of credit or return of the money held on deposit, in escrow, or in trust for closure of the facility. The application shall be accompanied by an itemized list of costs incurred. Upon determination by the department that complete closure has been accomplished, the department shall authorize in writing the release and return of all funds accumulated in such accounts or give written permission for cancellation of the bond or letter of credit. Determinations shall be made within 90 days of the application.

(b) *Long-term care.* 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 reimbursement from an escrow account, trust account, or deposit with the department, or other approved methods, or for reduction of the bond, insurance or letter of credit equal to the estimated costs for long-term care for that year. The 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 may authorize in writing the release of the funds or approve a reduction in the bond or letter of credit. Prior to authorizing a release of the funds or a reduction of the bond or letter of credit, the department shall determine that adequate funds exist to complete required long-term care work for the remaining period of owner responsibility. Determinations shall be made within 90 days of the application. Any funds remaining in an escrow account, trust account, or on deposit with the department at the termination of the period of owner responsibility shall be released to the owner.

History: Cr. Register, February, 1980, No. 290, eff. 3-1-80; r. and recr. Register, September, 1981, No. 309, eff. 10-1-81; reprinted to correct formulas in sub. (4), Register, November, 1981, No. 311; am. (3) (d), (4) (a) 1., (4) (b) 1., Register, June, 1982, No. 318, eff. 7-1-82; am. Register, May, 1984, No. 341, eff. 5-1-84.

NR 180.16 Waste management fund. (1) **APPLICABILITY.** (a) All owners or operators of licensed solid waste land disposal facilities shall pay to the department a tonnage fee for each ton of solid waste received and disposed of at the facility, or a minimum waste management fund base fee of \$100, whichever is greater, until the facility no longer receives waste and begins closure activities, except as otherwise provided in s. 144.441 (3) (b) or (c), Stats. The department shall deposit all tonnage and waste management base fees into the waste management fund provided for in s. 25.45, Stats.

(b) For all solid waste land disposal facilities with a plan of operation approved under s. 144.44 (3), Stats., after May 20, 1978, the owner shall choose to be responsible for the long-term care of the facility for either 20 or 30 years after facility closure. The fees to be paid by the owner or

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operator into the waste management fund shall be in accordance with sub. (3) (a) and (d), if applicable, or sub. (3) (b), whichever fee is greater.

(c) For solid waste land disposal facilities initially licensed between May 21, 1975 and May 20, 1978 for which the owner successfully applied before May 21, 1980 for a determination by the department that the facility's design and plan of operation comply substantially with the requirements necessary for plan approval under s. 144.44 (3), Stats., the owner shall choose to be responsible for the long-term care of the facility for either 20 or 30 years after facility closure. The fees to be paid by the owner or operator into the waste management fund shall be in accordance with sub. (3) (a) and (d), if applicable, or sub. (3) (b), whichever fee is greater.

(d) For all solid waste land disposal facilities not approved as set forth in par. (b) or (c), the fees to be paid by the owner or operator into the waste management fund shall be those indicated under the 30 year rate of payment in sub. (3) (a) and (d), if applicable, or sub. (3) (b), whichever fee is greater. The owner or operator of a solid waste land disposal facility licensed and in existence on May 21, 1978 may, but will not be required to, seek approval of the facility's plan of operation under s. 144.44 (3) (ar), Stats.

(e) For those companies which have provided proof of financial responsibility by the net worth method under s. 144.443 (4) and (8), Stats., the fees to be paid by the owner or operator into the waste management fund shall be in accordance with sub. (3) (c), if applicable, or sub. (3) (b), whichever fee is greater.

(2) **CERTIFICATION.** The owner or operator of a licensed solid waste land disposal facility shall certify, on a form provided by the department, the amount of solid 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 department shall mail the certification form to the owner or operator every January. The certification form shall be completed and returned to the department with the appropriate fee within 45 days after mailing of the form by the department to the owner or operator. An owner or operator failing to submit the waste management certification form and appropriate fees within 45 days after mailing of the form to the owner or operator shall pay a late processing fee of \$50.

(3) **FEES.** (a) The solid waste tonnage fees established in s. 144.441 (4), Stats., are summarized in table 6.

TABLE 6
WASTE MANAGEMENT FUND
TONNAGE FEES

Waste Type	Rate of Payment	
	20 Years Period of Owner Responsibility	30 Years
1. Municipal solid waste	3.5¢/ton	1.5¢/ton
2. Ashes and sludges from electric and process steam generating facilities	3.5¢/ton	1.5¢/ton
3. Pulp or paper mill sludges produced by waste treatment or manufacturing processes	3.5¢/ton	1.5¢/ton
4. Manufacturing process solid waste from foundries	3.5¢/ton	1.5¢/ton
5. Sludges produced by municipal wastewater treatment plants	3.5¢/ton	1.5¢/ton
6. All other solid wastes not designated as hazardous	3.5¢/ton	1.5¢/ton

(b) As provided in s. 144.441 (5), Stats., the owner or operator shall pay to the department a waste management fund base fee of \$100 for each calendar year.

(c) The facilities described in sub. (1) (e) shall increase the tonnage fees in par. (a) and if applicable, par. (d) by 25%.

(d) The hazardous waste tonnage fees established in s. 144.441 (4) (b), (c), (e) and (f), Stats., shall be paid for each ton on hazardous waste received and disposed of at a solid waste land disposal facility described in sub. (1) (b) or (c).

(4) USE OF FUND. Only an approved facility as defined in s. 144.441 (2) (a) 1., Stats., is eligible for use of the money accumulated in the waste management fund. The monies in the waste management fund shall be expended exclusively as set forth in s. 144.441 (6), Stats.

(5) DETERMINATION OF WASTE TONNAGES. (a) *Determination by owner or operator.* The owner or operator shall, subject to department approval, use one of the following methods for determining the number of tons of waste received and disposed of at the solid waste land disposal facility.

1. The owner or operator may use actual weight or volume records.

2. The owner or operator may establish by field measurement the volume of waste disposed and convert to a weight using an assumed compaction density and cover material ratio using the conversion factors in table 7 in par. (b).

3. The owner or operator may conduct a survey during a representative period of operation to establish average representative weights or volumes of waste disposed. Changes in seasonal population shall be considered when establishing representative weights or volumes.

4. The owner or operator may use a waste generation rate of 2 pounds per capita per day and apply it over the number of days in the reporting period. Changes in seasonal population shall be considered when apply-

ing a per capita generation rate. This method may be used only for rural facilities serving a population equivalent of 2,500 or less and receiving little or no industrial waste.

(b) *Conversion factors.* The conversion factors in table 7 shall be used. All conversion factors are based on wet densities. The densities provided for domestic residential waste and commercial waste in table 7 are subject to mechanical compaction, such as packer trucks or enclosed roll off containers coupled to hydraulic compactors. If the waste is loose, 200 pounds per cubic yard shall be used as the conversion factor.

TABLE 7
CONVERSION FACTORS

Municipal solid waste	
As delivered	
Domestic residential	425 pounds/cubic yard
Commercial	375 pounds/cubic yard
Industrial - other than specified below	300 pounds/cubic yard
Bulky	400 pounds/cubic yard
Trees and brush	300 pounds/cubic yard
Demolition	1,250 pounds/cubic yard
Liquids	8.34 pounds/gallon
Compacted in place	1,000 pounds/cubic yard
facilities receiving only demolition waste	1,400 pounds/cubic yard
Municipal wastewater sludge	8.34 pounds/gallon
	1,684 pounds/cubic yard
Pulp and papermill sludge	
As delivered - uncompacted	1,800 pounds/cubic yard
In-field - consolidated	2,200 pounds/cubic yard
Utility ash - fly and bottom	
As delivered - uncompacted	2,200 pounds/cubic yard
In-field - compacted	2,400 pounds/cubic yard
Foundry wastes	
As delivered - uncompacted	2,600 pounds/cubic yard
In-field - compacted	3,000 pounds/cubic yard

(c) *Department estimates.* The department may estimate by waste category the number of tons received at a solid waste land disposal facility. The department's estimate shall appear on the certification form and shall be based on the number of tons received and reported on for the previous reporting period.

(6) WASTE MANAGEMENT FUND EXPENDITURES. (a) *Payments for long-term care after termination of owner responsibility.* The department shall determine the necessary maintenance requirements for the long-term care of an approved solid waste land disposal facility after the termination of the owner's responsibility. The department shall comply with s. 16.75, Stats., when applicable, for contracting services for the required long-term care maintenance of solid waste land disposal facilities.

(b) *Payments of related costs.* The department shall comply with s. 144.441 (6) (f), Stats., prior to making any expenditures from the waste management fund under s. 144.441 (6) (e), Stats.

(c) *Other payments.* The department may expend monies from the waste management fund in accordance with s. 144.441 (6) (g) to (i), Stats.

History: Cr. Register, August, 1979, No. 284, eff. 9-1-79; am. (1), Register, September, 1981, No. 309, eff. 10-1-81; am. Register, May, 1984, No. 341, eff. 6-1-84.

NR 180.17 Salvage yards. (1) **GENERAL.** No person shall operate or maintain a salvage yard unless the person has obtained an operating license from the department, except as otherwise provided in sub. (2).

(2) **EXEMPTIONS.** Operations used exclusively for the storage of less than 7 junked automobiles are exempt from the requirements of this section.

(3) **LOCATIONAL CRITERIA.** No person shall establish, operate, maintain or permit the use of property for a salvage yard within the following areas:

(a) Within 1,000 feet of any navigable lake, pond or flowage.

(b) Within 300 feet of a navigable river or stream.

(c) Within a flood plain.

(d) Within an area from which the department after investigation finds there is a reasonable probability that solid waste or leachings therefrom may have a detrimental effect on any surface water.

(e) Within an area from which the department after investigation finds there is a reasonable probability that solid waste or leachings therefrom may have a detrimental effect on groundwater quality.

(f) Within 1,000 feet of the nearest edge of the right-of-way of any interstate or federal aid primary highway or the boundary of any public park, unless the site is screened by natural objects, plantings, fences or other appropriate means so as not to be visible from the highway or park.

(g) Within wetlands.

(h) Within a critical habitat area.

(4) **PLAN OF OPERATION.** No person shall establish a new salvage yard or expand an existing salvage yard until a plan of operation has been submitted to and approved by the department in writing. The plan of operation shall include at a minimum the following:

(a) A map or aerial photograph of the area showing land use and zoning within $\frac{1}{4}$ -mile of the salvage yard boundaries. The map or aerial photograph shall be of sufficient scale to show all salvage yard boundaries, all homes industrial buildings, roads, water courses, and other applicable details. All such details, plus the topography, and direction shall be identified and indicated on the map or aerial photograph.

(b) A plot plan of the site showing direction, dimensions, elevations, surface drainage, access roads, fencing, means for limiting access, method of screening, and proposed layout of operation covering location

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of salvage material processing area, nonsalvageable material storage area, and liquid material handling and storage area.

(c) A report indicating the following:

1. The type, expected quantity and source of material to be brought to the yard.
2. Present quality and types of salvage materials in inventory.
3. The type and amount of equipment to be provided at the yard for processing purposes.
4. The outlet for the salvaged material.
5. The means for on-site storage of nonsalvageable items and the means for disposal.
6. The means for on-site handling and storage of liquids generated or handled as part of the salvage yard operation and the outlet for these materials. These liquids may include but are not limited to gasoline, oils, fluids, antifreeze, acids, caustics and similar materials which require special handling and disposal to protect the environment.
7. Types and means for fencing and screening of the salvage yard property.
8. Procedures and types of emergency fire control.
9. Persons responsible for actual operation and maintenance of the yard.
10. Operation procedures which detail how compliance will be achieved with sub. (5).

(5) OPERATIONAL REQUIREMENTS. No person shall operate or maintain a salvage yard except in conformance with the approved plan of operation and the following practices:

- (a) Garbage or similar putrescible material shall not be present at a salvage yard.
- (b) No salvage yard shall be operated at a solid waste land disposal operation unless both operations are completely separated or fenced.
- (c) No open burning of solid waste shall be conducted.
- (d) The boundaries of the salvage yard shall be marked with a fence or other object(s) to clearly define the boundary of the licensed acreage.
- (e) An attendant shall be on duty at the yard at all times while the yard is open for business.
- (f) The yard shall be surrounded by a solid fence, rapidly growing trees, shrubbery or other appropriate means to screen it from the surrounding area. If trees are used, they shall be capable of screening the yard all year or other methods shall be used in combination with the trees to provide screening during all seasons.
- (g) A sign, acceptable to the department, shall be posted at the entrance which indicates the name and license number of the operation.

The letters and numbers shall be a minimum of 2 inches high with ½-inch minimum width and in a color distinct from its background.

(h) The storage of nonsalvageable materials shall be conducted in compliance with NR 180.07.

(i) Any windblown material resulting from operation of the yard shall be collected daily and properly disposed.

(j) The operation shall be conducted in an orderly and aesthetic manner.

(6) **CLOSURE.** Any person who maintains or operates a salvage yard or who permits use of property for such purpose shall, when the yard is closed by the operator or property owner, or when the department determines that closure is required, close the yard by removing all salvageable materials within a time period specified by the department, which shall be no greater than 120 days. The operator shall notify the department, in writing, 60 days prior to the date of closing a salvage yard.

History: Cr. Register, February, 1980, No. 290, eff. 3-1-80.

NR 180.18 Other facility requirements not specifically covered by this chapter. Before any method of solid waste handling, processing, or disposal not otherwise provided for in this chapter is established, the department may require the applicant to conduct a feasibility study as outlined in this chapter. If the facility is determined by the department to be feasible, complete plans, specifications, and design data for the project detailing such areas as site locations, preparation, operation, monitoring, closure, and long-term care shall be submitted to and be approved in writing by the department prior to the commencement of operations. All such information shall be prepared and submitted by a registered professional engineer. An initial plan review fee and the annual license fee, as provided in NR 180.05, shall be submitted for each newly established method of solid waste handling, processing and disposal. Prior to operation of such a facility, a solid waste disposal operation license is required. The site and its operation shall conform to any department approved plan.

History: Cr. Register, February, 1980, No. 290, eff. 3-1-80.

NR 180.19 Environmental impact. Every application for licensing under this chapter will be reviewed to determine whether the department will require the applicant to submit an environmental impact report pursuant to s. 23.11(5), Stats., or whether the department is required to prepare an environmental impact statement pursuant to ch. NR 150.

History: Cr. Register, February, 1980, No. 290, eff. 3-1-80.

NR 180.20 Exemptions. Exemptions from the requirements of this chapter may be granted in special cases except as otherwise provided. A person may apply for an exemption by providing the department with a request in writing and documentation justifying the need for the exemption. Before granting exemptions, the department shall take into account such factors as population of the area being served, amounts of waste generated, location of the disposal operation, nature of wastes, seasonal character of the disposal operation, and other significant factors. Exemptions may be granted to encourage the beneficial utilization of solid waste if the department finds that the waste utilization proposed

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would not result in environmental pollution and that regulation under this chapter would discourage such beneficial utilization or would not be warranted in light of the potential hazard to public health or the environment. All exemptions pertaining to a solid waste disposal operation will be granted in writing by the department. Exemptions shall be reviewed periodically with particular regard to any potential nuisance, hazard to public health and safety, or potential degradation of the environment.

History: Cr. Register, February, 1980, No. 290, eff. 3-1-80.