

Appendix A

Specific Requirement for Financial Responsibility Instruments

A-1 Trust Fund with Surety

- (a) An applicant may satisfy the financial responsibility requirements of subchapter 9 by establishing a trust fund for the benefit of the Agency according to the requirements of this section and subsections A-2 (b), (c), (f), (g), (h), (i), (k), and (l). The surety bond must guarantee full payment into the trust fund of the cost estimate for closure or post-closure plan submitted with the certification application. The trustee for the trust fund must be a bank or financial institution which has the authority to act as a trustee and whose operations are regulated and examined by the State of Vermont. The surety for the bond must be a surety company licensed to operate as a surety in the State of Vermont and must be approved by the secretary.
- (b) The trust agreement and surety bond shall be executed in the form provided for such purposes by the secretary.
- (c) Payments to the trust fund must be made annually by the certification holder over the term of the state certification issued for such facility or over the life of the facility if such facility life is shorter than the term of the state permit. Payments must be made as follows:
 - (1) The first payment shall be made when the trust is established and shall be at least equal to the cost estimated divided by the number of years in the term of the permit or life of the facility, whichever is the shorter.
 - (2) Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be the cost estimate minus the current value of the trust fund, divided by the number of years remaining in the term of the certification or the remaining number of years in the life of the facility, whichever is the shorter.
- (d) The certification holder may accelerate payments into the trust fund or he may deposit the full amount of the cost estimate at the time the fund is established. However, the value of the fund must be maintained at no less than the value would have been if annual payments were made as specified in paragraphs a and c of this subsection.

- (e) Whenever the cost estimate changes after the pay-in period is completed, the certification holder shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new cost estimate, the certification holder must, within 90 days of the change in the cost estimate, deposit a sufficient amount into the fund so that its value after payment at least equals the amount of the new estimate, or obtain other financial assurance as specified in subchapter 9 to cover the difference. If the value of the trust fund is greater than the total amount of the cost estimate, the certification holder may submit a written request to the secretary for release of the amount which is in excess of the cost estimate.
- (f) If the certification holder substituted other financial responsibility as specified in subchapter 9 for all or part of the trust fund, he may submit a written request to the secretary for release of the amount which is greater than the amount required as a result of the substitution.
- (g) Within 60 days after receiving a request from the certification holder for release of funds specified in paragraphs e and f of this subsection, the secretary will instruct the trustee to release to the certification holder such funds as the secretary specifies in writing.
- (h) After beginning final closure or during the period of post-closure care, a certification holder or any other person authorized to conduct closure, may request reimbursement for closure or post-closure expenditures respectively by submitting itemized bills to the secretary within 60 days after receiving bills for closure or post-closure activities. The secretary shall instruct the trustees to make reimbursement in those amounts as the secretary determines are in accordance with the closure or post-closure plan or are otherwise justified.
- (i) The secretary shall agree to terminate the trust when:
 - (1) The certification holder substitutes alternate financial responsibility as specified in subchapter 9; or
 - (2) The secretary notifies the certification holder that he is no longer required by subchapter 9 to maintain financial responsibility for the closure or post-closure of the facility.
- (j) The term of the surety bond shall be for the pay in period of the trust fund.

- (k) The bond must guarantee that the certification holder will:
 - (1) Fund the trust in the amount of the cost estimate by the end of the pay-in period; or
 - (2) During the pay-in period, fund the trust in the amount of the cost estimate within 15 days after an order to begin closure or post-closure care by the secretary or by a court, or following issuance of a notice of revocation of the certification; or
 - (3) Provide alternative assurance within 90 days after receipt by the secretary of a notice of cancellation of the bond by the surety.

A-2 Surety Bonds

- (a) An applicant may satisfy the financial responsibility requirements of subchapter 9 by obtaining a surety bond according to the requirements of this section and by submitting the original copy of the bond with the facility closure or post-closure plans with the certification application. Only bonds issued by surety companies licensed to operate as sureties in the State of Vermont and approved by the secretary will satisfy the requirements of this section.
- (b) A surety bond form supplied by the secretary shall be used by the applicant and the surety.
- (c) The surety bond must name the applicant as the principal and name the State of Vermont as the obligee.
- (d) The term of the bond shall be for the life of the facility for which a certification is applied by the applicant through the closure period. A bond used for post-closure responsibility shall extend through the post-closure period.
- (e) The bond must guarantee that the certification holder will:
 - (1) Perform final closure or post-closure care in accordance with the closure or post-closure plan and other requirements in the certification for the facility; or
 - (2) Perform final closure or post-closure care following an order to begin closure or post-closure care issued by the secretary or by a court, or following issuance of a notice of revocation of the certification; or

- (3) Provide alternate financial assurance as specified in this section within 90 days after receipt by the secretary of a notice of cancellation of the bond from the surety.
- (f) The surety will become liable on the bond obligation when the certification holder fails to perform as guaranteed by the bond.
- (g) The penal sum of the bond must be in an amount at least equal to the amount of the closure or post-closure cost estimate.
- (h) Whenever the cost estimate increases to an amount greater than the amount of the penal sum of the bond, the certification holder shall, within 90 days after the increase, cause the penal sum of the bond to be increased to an amount at least equal to the new estimate or obtain other financial assurance, as specified in subchapter 9, to cover the increase. Whenever the cost estimate decreases, the penal sum may be reduced to the amount of the cost estimate following written approval by the secretary. Notice of an increase or decrease in the penal sum must be sent to the secretary by certified mail within 90 days after the change.
- (i) the bond shall remain in force for its term unless the surety sends written notice of cancellation by certified mail to the certification holder and to the secretary. Cancellation can not occur, however:
 - (1) During the 120 days beginning on the date of receipt of the notice of cancellation by the secretary as shown on the signed return receipt; or
 - (2) While a compliance or enforcement action is pending.
- (j) following a determination that the certification holder has failed to perform final closure or post-closure care in accordance with the approved plan and other certification requirements when required to do so, the surety shall perform final closure or post-closure care in accordance with the terms of the bond, approved plan and other certification requirements or closure order. As an alternative to performing final closure or post-closure care the surety may forfeit the full amount of the penal sum to the State.
- (k) The certification holder may cancel the bond if the secretary has given prior written consent based on receipt of evidence of alternative financial assurance as specified in subchapter 9.
- (l) The secretary will notify the surety if the certification holder provides alternate financial assurance as specified in subchapter 9.

- (m) The surety will not be liable for deficiencies in the performance of closure by the certification holder after the certification holder has been notified by the secretary that the certification holder is no longer required by subchapter 9 to maintain financial assurance for closure or post-closure care of the facility.
- (n) As performed either by the certification holder or the surety, proper closure of post-closure care shall be deemed to have occurred only when the secretary so determines according to these rules.

A-3 Letters of Credit

- (a) An applicant may satisfy the requirements of subchapter 9 by obtaining an irrevocable standby letter of credit according to the requirements of this section and by submitting the original copy of the letter of credit attached to the facility closure or post-closure plan along with the certification application. For new facilities, the letter of credit must be effective before the initial receipt of waste at the facility for which it is issued. The issuing institution must be a bank or other financial institution which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by the State of Vermont.
- (b) The wording of the letter of credit must be approved by the secretary.
- (c) The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year. If the issuing institution decides not to extend the letter of credit beyond the current expiration date it must, at least 120 days before the date, notify both the certification holder and the secretary by certified mail of that decision. The 120 day period will begin on the date of receipt by the secretary as shown on the signed return receipt. Expiration can not occur, however, while a compliance or enforcement action is pending.
- (d) The letter of credit must be issued for at least the amount of the closure or post-closure cost estimate.
- (e) Whenever the cost estimate increases to an amount greater than the amount of credit, the certification holder shall, within 90 days of the increase, cause the amount of credit to be increased to an amount at least responsibility as specified in subchapter 9 to cover the increase. Whenever the cost estimate decreases, the letter of credit may be reduced to the amount of new estimate following written approval by the secretary. Notice of an increase or

decrease in the amount of the credit shall be sent to the secretary by certified mail within 90 days of the change.

- (f) Following a determination that the certification holder has failed to perform closure or post-closure care in accordance with the approved plan or other certification requirement, the secretary will draw on the letter of credit.
- (g) the certification holder must establish alternate financial responsibility as specified in subchapter 9 and obtain written approval from the secretary within 90 days after receipt by both the certification holder and the secretary of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date. If the certification holder does not establish such alternative financial responsibility within the 90 days, the secretary will draw on the letter of credit. If the issuing institution grants an extension of the term of credit, the secretary may do the drawing during the last 30 days of credit if the operator has failed to provide alternative financial responsibility as specified in subchapter 9 and obtain written approval of such responsibility from the secretary .
- (h) The secretary shall return the original letter of credit to the issuing institution for termination when:
 - (1) the certification holder substitutes alternate financial responsibility for closure or post-closure as specified in subchapter 9; or
 - (2) The secretary notifies the certification holder, in accordance with section 6-901(l) of these rules, that he is no longer required to maintain financial responsibility for closure or post-closure of the facility.

A-4 Deposits of Acceptable Collateral

- (a) An applicant may satisfy the requirements of subchapter 9, wholly or in part, by filing with the secretary a collateral bond payable to the State of Vermont, conditioned so that the applicant shall comply with the closure or post-closure plan filed for the facility. The amount of the bond shall be at least equal to the estimated closure or post-closure cost of the facility. for which the certification application has been filed or any part thereof not covered by other financial responsibility instruments. Such bond shall be executed by the applicant after depositing with the secretary acceptable collateral, the market value of which shall be at least equal to the total estimated closure or post-closure cost or any part thereof not covered by other financial responsibility instruments.

- (b) Acceptable collateral may include certificates of deposit, negotiable bonds of the United States Government, the State of Vermont or any of its agencies, any government authority within the State of Vermont, or any county, municipality or other local bond issuing authority within the State of Vermont approved as acceptable for financial responsibility purposes by the secretary.
- (c) The secretary shall, upon receipt of such collateral, place the instrument(s) with the state treasurer to be held in the name of the state of Vermont in trust, for the purposes for which such deposit is made.
- (d) The certification holder shall be entitled to demand, receive and recover the interest and income from said instrument(s) as it becomes due and payable as long as the market value of the instrument(s) plus any other mechanisms used continue to be at least equal the closure or post-closure cost estimate.
- (d) the certification holder shall also be permitted to replace the collateral instruments with other like instruments of at least equal market value upon proper notification to the secretary and the state treasurer.
- (f) In the event of failure of the certification holder to comply with the final closure or post-closure plan, the secretary shall declare said collateral forfeited and shall request the state treasurer to convert said collateral into cash and transfer such funds to the secretary to be used for final closure or post-closure purposes.
- (g) The term of a collateral bond shall be for the life of the facility through the closure or post-closure period, as appropriate.
- (h) The secretary shall return collateral instruments to the certification holder when:
 - (1) the certification holder substitutes alternate financial responsibility for closure or post-closure as specified in subchapter 9; or
 - (2) the secretary notifies the certification holder, in accordance with these rules, that he is no longer required to maintain financial responsibility for closure or post-closure of the facility.

A-5 Financial Test and Corporate Guarantee

- (a) An applicant may satisfy the subchapter 9 requirements for financial responsibility by demonstrating that he passes a financial test as specified in

this section. To pass this test the applicant must meet the criteria of either subsection (a)(1) or (a)(2).

- (1) The applicant must have:
 - (A) two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and
 - (B) new working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates; and
 - (C) tangible net worth of at least \$10 million; and
 - (D) assets in the United States amounting to at least 90% of his total assets or at least six times the sum of the current closure and post-closure cost estimates.
 - (2) The applicant must have:
 - (A) a current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and
 - (B) tangible net worth at least six times the sum of the current closure and post-closure cost estimates; and
 - (C) net worth of at least \$10 million; and
 - (D) assets located in the United States amounting to at least 90% of his total assets or at least six times the sum of the current closure and post-closure cost estimates.
- (b) To demonstrate that he meets this test, the applicant shall submit the following items to the secretary.
- (1) A letter signed by the applicant's chief financial officer and worded as specified by the secretary.
 - (2) A copy of the independent certified public accountant's report on

- examination of the applicant's financial statement for the latest completed fiscal year; and
- (3) a special report from the applicant's independent certified accountant to the applicant stating that:
 - (A) He has compared the data which the letter from the chief financial officer specifies as having been derived from an independently audited, year-end financial statement for the latest fiscal year with the amounts in such financial statements; and
 - (B) In connection with that procedure, no matters come to his attention which caused him to believe that the specified data should be adjusted.
 - (c) For a new facility, the applicant shall submit the items specified to the secretary at least 60 days before the date on which solid waste is first received for treatment, storage, or disposal.
 - (d) After the initial submission of items specified in subsection (b), the certification holder shall send updated information to the secretary within 90 days after the close of each succeeding fiscal year. This information shall consist of all three items specified in subsection (b).
 - (e) If the certification holder no longer meets the requirements of subsection (a), he shall send notice to the secretary of intent to establish alternate financial responsibility as specified in subchapter 9. The notice shall be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the certification holder no longer meets the requirements. The certification holder shall provide the alternate financial responsibility within 120 days after the end of such fiscal year.
 - (f) The secretary may, based on a reasonable belief that the certification holder may no longer meet the requirements of subsection (a), require reports of financial condition at any time from the operator in addition to those specified in subsection (b). If the secretary finds, on the basis of such reports or other information, that the certification holder no longer meets the requirements of subsection (a), the certification holder shall provide alternate financial responsibility as specified in subchapter 0 within 30 days after notification of such a finding.
 - (g) The secretary may disallow use of this test on the basis of qualification in the

opinion expressed by the independent certified public accountant in his report on examination of the applicant's or certification holder's financial statements (see subsection (b)(2)). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The secretary will evaluate other qualifications on an individual basis. The certification holder shall provide alternate financial responsibility as specified in subchapter 9 within 30 days after notification of the disallowance.

- (h) During the period of post-closure care, the secretary may approve a decrease in the current post-closure cost estimate for which this test demonstrated financial responsibility if the certification holder demonstrates to the secretary that the amount of the cost estimate exceeds the remaining costs of the post-closure care.
- (i) the certification holder is no longer required to submit the items specified in subsection (b) when:
 - (1) a certification holder substitutes financial responsibility as specified in subchapter 9; or
 - (2) the secretary releases the certification holder from the requirements of this section as specified in section 6-902(1) of these rules.
- (j) An certification holder may meet the requirements of this subsection by obtaining a written guarantee, hereafter referred to as "corporate guarantee." The guarantor shall be the parent corporation of the certification holder. The guarantor shall meet the requirements for applicant or certification holder in subsections (a) through (g) and shall comply with the terms of the corporate guarantee. The wording of the corporate guarantee shall be specified by the secretary. The corporate guarantee shall accompany the items sent to the secretary as specified in subsection (b). The terms of the corporate guarantee shall provide that:
 - (1) If the certification holder fails to perform final closure or post-closure of a facility covered by the corporate guarantee in accordance with the closure plan or post-closure plan, the guarantor will do so or establish a trust fund in the name of the certification holder as specified in these rules.
 - (2) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the certification holder and to the secretary. The cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of

cancellation by both the certification holder and the secretary as evidenced by the return receipts.

- (3) If the certification holder fails to provide alternate financial responsibility as specified in subchapter 9 and obtain the written approval of such alternate responsibility from the secretary within 90 days after the receipt by both the certification holder and the secretary of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial responsibility in the name of the certification holder.

APPENDIX B

Processes to Significantly Reduce and
Further Reduce Pathogens

1. Processes to Significantly Reduce Pathogens

Aerobic Digestion

Aerobic conditions are maintained at residence times ranging from 60 days at 15°C to 40 days at 20°C, with a volatile solids reduction of at least 38 percent.

Anaerobic Digestion

The process is conducted without air at residence times ranging from 60 days at 20°C to 15 days at 30°C, to 55°C, with a volatile solids reduction of at least 38 percent.

Air Drying (Sand Beds)

Sludge is allowed to dry on sand beds for a minimum of 90 days, 60 days of which temperatures average above 0°C on a daily basis. Sludge depth on the drying beds is 9 inches or less at the time the sludge is deposited on the beds.

Composting

Sludge is maintained at minimum operation conditions of 40°C for five days. For four hours during this period the temperature exceeds 55°C. The composting methods used are the static aerated pile, windrow or within-vessel methods.

Lime Stabilization

Lime is added to produce a pH of 12 after two hours contact.

2. Processes to Further Reduce Pathogens

High Temperature Composting

Using the within-vessel or static aerated pile composting method, the sludge is maintained at operating conditions of 55°C or greater for three days. Using the windrow composting method, the sludge attains a temperature of 55°C or greater for at least 15 days during the composting period. During the high temperature period, there will be a minimum of five turnings of the windrow.

Heat Drying

Dewatered sludge cake is dried by direct or indirect contact with hot gases, and moisture content is reduced to 10 percent or lower. Sludge particles reach temperatures well in excess of 80°C.

Heat Treatment

Liquid sludge is heated to temperature of 180°C for 30 minutes.

High Temperature Aerobic Digestion

Liquid sludge is agitated with air or oxygen to maintain aerobic conditions at residence times of 10 days at 55°C - 60°C with a volatile solid s reduction of at least 38 percent.

The processes below do not, on their own, reduce the attraction of disease vectors, therefore, they can only be used after a process to significantly reduce pathogens.

Beta Ray Irradiation

Sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (20°C).

Gamma Ray Irradiation

Sludge is irradiated with gamma rays from certain isotopes, such as 60 cobalt and 137 cesium, at dosages of at least 1.0 medarad at room temperature (20°C).

Pasteurization

Sludge is maintained for at least 30 minutes at a minimum temperature of 70°C.

METHOD 9095A

PAINT FILTER LIQUIDS TEST

To receive a copy of the paint filter liquids test (Method 9095A) contact:

**Solid Waste Management Program
Waste Management Division
103 South Main Street
West Office Building
Waterbury VT 05671-0404**

Telephone 802-241-3444