



STATE OF ARKANSAS
DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID WASTE MANAGEMENT DIVISION
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MEMORANDUM

TO: All Solid Waste Disposal and Processing Facilities Owners/ Operators

FROM: Laura Gilson, Chief, Solid Waste Division

DATE: August 8, 1996

SUBJECT: Financial Assurance Updates

Act 510 of the 1995 General Assembly of the State of Arkansas amended the statutes regarding the posting of financial assurance with the Department for all types of solid waste disposal and processing facilities. This act supersedes any conflicting requirements of Regulation Number 22 and any permit conditions.

Act 510 of 1995 will impact solid waste facilities as described below.

Class 1 Landfills - Class 1 landfills are subject to the federal financial assurance requirements of Subtitle D. Financial Assurance requirements are scheduled to take effect April 9, 1997. Act 510 made state financial assurance requirements equal to Subtitle D.

Class 3 and Class 4 Landfills - As before, financial assurance for closure must be posted with the Department. However, under Act 510:

- Post closure financial assurance is also required,
- Closure and Post Closure financial assurance must be based on the total estimated cost to close the landfill and to perform post closure care (there is no longer a 1500 dollar per acre limitation);
- Cost estimates must be updated annually; and
- There are a wider variety of financial assurance mechanisms available.

Composting, Transfer Stations, and Waste Recovery Facilities - If applicable to the permit, financial assurance requirements are equal to the requirements for solid waste disposal facilities described above.

In order to implement the new state and federal rules in an orderly manner, the following interim dates have been established for compliance.

Not later than the close of business on **November 1, 1996**, updated, itemized estimates for the cost of closure and post closure care shall be furnished to the Solid Waste Division. If a recent (1996 calendar years) itemized estimate is already on file with the Division, provide a statement to that

effect. Guidance to estimate the closure and post closure costs is enclosed for your reference.

Not later than **December 20, 1996**, the Solid Waste Division will notify permit holders as to the acceptance or rejection of the cost estimate for financial assurance.

An updated financial instrument in the approved amount must be furnished to the Division not later than **April 9, 1997**. The current acceptable mechanisms for posting financial assurance can be found in Chapter 14 of Regulation 22.

In the future, the law and regulations require annual updates of the cost estimates and the amount of financial assurance. Annual updates shall consider if conditions at the landfill have changed since the last estimate. Changed conditions may include a larger area needing final cover, future increases in maintenance cost due to installation of new gas collection systems or other circumstances. If no conditions have changed, the estimate can simply be updated for inflation. These future updates should be furnished at the same time that annual reports are submitted. The schedule for furnishing future reports and financial assurance mechanisms is attached.

Thank you for your interest and cooperation in meeting our program requirements. Should you have questions or need assistance, the contact persons described below are available to assist you.

For questions about the program or this notice contact:
Mike Hood, P.E., Technical Manager (501) 682-0602

For questions about financial instruments contact:
Susan Speake, Program Coordinator (501) 682-0589

For questions about cost estimates and future updates:
Prasad Chirumamilla, Permit Engineer (501) 682-0608

Enclosures: Guidance for preparing Closure and Post-Closure Plans and Cost Estimates;
Act 510 of 1995 enacted by General Assembly of the State of Arkansas;
Allowable Mechanisms to demonstrate financial assurance as per Sections 22.1405
and 22.1406 of Regulation 22;
Schedule for submitting annual reports and cost estimates; and
An example for estimating the closure and post closure costs.



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**GUIDANCE FOR PREPARING CLOSURE AND POST-CLOSURE
PLANS AND COST ESTIMATES
TO COMPLY WITH ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
REGULATION NO. 22
August 8, 1996**

I. PURPOSE

This document is intended as guidance for owners or operators of all landfill facilities and processing facilities to comply with the financial assurance requirements of Regulation 22 and Subpart G of 40 CFR § 258. The guidance primarily concerns the preparation of closure and post closure care plans and cost estimates.

II. BACKGROUND

Chapter 14 of Regulation 22 provides financial assurance requirements for owners or operators of Solid Waste Management facilities. The requirements of this chapter apply to all owners or operators except those that are State or Federal Government entities.

The owners or operators of all Solid Waste Management facilities are required to provide financial assurance for closure of the facilities. In order to determine the amount of financial assurance, the owner or operator must prepare a detailed written estimate in current dollars of the cost of having a third party close the largest area of all units at any time during the active life of the facility. The estimate is to be based on the closure being performed as provided in the facility's closure plan required under 22.1301(c).

The owners or operators of all Solid Waste Management facilities are required to provide financial assurance to conduct post closure care of the MSWLF. In order to determine the amount of financial assurance, the owner or operator must have a detailed written estimate in current dollars of the cost of having a third party conduct post closure care and monitoring. The estimate is to be based upon post closure care being performed as provided in the facility's post closure care plan required under 22.1302(d).

III. CLOSURE PLAN

Section 22.1301(c) provides closure plan contents and requires that the plan address the following items:

- A. A description of the final cover, designed in accordance with 22.1301(a) (and the facility's permitted design) and the methods and procedures to be used to install the cover. Items that shall be included in this description are:
 1. Construction specifications. This would include any specifications furnished to contractors for construction of the final cover system. The specifications shall include sufficient information for a third party to acquire and install the final cover system. As with 1), the specifications should include all features that will be incorporated over the life of the facility.
 2. Quality assurance and quality control (QA/QC) measures for furnishing and installing the final cover material. In the case of a composite final cover design, this should include QA/QC measures for both the clay and synthetic components.
 3. Erosion control measures.
- B. Design documents. This would include plan sheets, details, cross sections, etc. as necessary to illustrate the permitted final cover design. The documents shall be sufficient to allow construction of any portion of the final cover system. For example, in the case where final cover areas include a textured synthetic liner, the plans shall be of sufficient detail to determine where there is a transition from textured to non-textured liner.
 1. Construction specifications. This would include any specifications furnished to contractors for construction of the final cover system. The specifications shall include sufficient information for a third party to acquire and install the final cover system. As with 1), the specifications should include all features that will be incorporated over the life of the facility.
 2. Quality assurance and quality control (QA/QC) measures for furnishing and installing the final cover material. In the case of a composite final cover design, this should include QA/QC measures for both the clay and synthetic components.
 3. Erosion control measures.
- C. An estimate of the largest area of the unit ever requiring a final cover at any time during the active life. This estimate determines the largest portion of the landfill that is "open" during the life of the facility which would be the largest amount of final cover that would have to be installed. This largest area can occur when there is a routine closure or a premature closure. A routine closure is when the final grades for all areas of the facility have been achieved; a premature closure is at some point where all final elevations have not been achieved.

To approximate this largest area scenario, it will be necessary to examine the design drawings and planned operational procedures and compare the procedures with construction and operational records. For example, if the landfill is constructed in phases and each phase will be covered when the entire phase has reached final grade, then the largest area may be that phase, plus the amount of the next phase which has been filled while covering the completed phase. In preparing this estimate, the economical construction of the synthetic component of the cover system should be taken into account. In no case should the largest area estimate be less than 5 acres.
- D. An estimate of the maximum inventory of wastes ever on-site over the active life of the

facility. This includes the largest amount of waste that would need to be handled if closure were to occur at any time during the facility's active life. The inventory for the purposes of this section assumes that some waste is stored on-site and not disposed. It is anticipated that this amount will typically be very small for most facilities. Types of waste that might be included in this section are "roll off" or other containers of recyclable wastes that are stored on site until a sufficient amount has been accumulated for off-site transport.

- E. A schedule for completing all activities necessary to satisfy the closure criteria in 22.1301. A schedule should be provided for normal or routine closure of a unit and a schedule for premature closure of the area identified in sub-section B. above. Depending on whether the closure is routine or premature, the schedule may include the following:
1. Prior to beginning closure, a notice of intent to close the unit has been placed in the operating unit and the Director notified;
 2. Closure activities must begin:
 - a. Within 30 days after the final receipt of waste in the unit; or
 - b. Within 1 year if the unit has remaining capacity, but has not received additional waste.
 3. Closure must be complete within 180 days of commencement.
 4. The closure must be certified by an independent registered professional engineer.
 5. After completion of all units, the owner or operator must record a notation on the deed to the landfill property that the land has been used as a landfill facility and its use is restricted:
 - a. Under 22.1301(j)(2) precluding any use of the facility that will disturb the integrity of the final cover liner; and
 - b. Under 22.1301(j)(3) which references Act 718 of the 1993 Arkansas General Assembly which makes it unlawful to construct any house, home, or building for residential purposes on a landfill site.
- F. A sample closure plan table of contents is provided as Table 1.

IV. POST-CLOSURE PLAN

Contents of the post-closure care plan are provided in 22.1302(d). The regulation requires that the plan address the following items:

- A. A description of the monitoring and maintenance activities required that includes:
 - 1. Maintaining the integrity and effectiveness of the final cover including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion and prevent run-on and run-off from eroding or damaging the final cover. This shall include frequent inspections of the facility and a means to document the inspections.
 - 2. Maintaining and operating the leachate collection system.
 - 3. Monitoring the groundwater in accordance with the requirements of Chapter 12 of the regulations.
 - 4. Maintaining and operating the gas monitoring system.
- B. Name, address, and telephone number of the person or office to contact about the facility during the post-closure period.
- C. A description of the planned uses of the property during the post-closure period. The uses shall not disturb the integrity of the final cover liner.
- D. After completion of the post-closure care period, an independent registered professional must certify that post-closure care has been completed in accordance with the post-closure care plan.
- E. A sample post-closure plan table of contents is provided in Table 2.

V. CLOSURE COST ESTIMATE

Items to be included in the closure cost estimate are as follows:

- A. The estimate must be for closure of the largest area ever requiring a final cover when the extent and nature of the closure would be the most expensive as determined in the closure plan (subsection III.B. above). The facility shall demonstrate that the largest area of closure will also be the most expensive closure. For example, if there are areas of the landfill that have smaller closure areas, but incorporate a more expensive final cover design, the facility shall demonstrate that the area selected is the most expensive closure required.
- B. The estimate shall be for constructing a final cover system as described in the closure plan and as permitted by the Department.
- C. Costs shall be based on what it would take for a third party to complete the work. Documentation should be provided for all costs.
- D. The cost estimate shall be adjusted annually for inflation.
- E. If conditions change to increase or decrease the closure cost estimate, then these changes

shall be documented with revisions to the closure plan. These closure plan revisions shall be submitted to the Department for concurrence.

- F. The estimate shall be detailed similar to that shown in Table 3. Cost items included in that estimate are taken from Chapter 6 of Solid Waste Disposal Facility Criteria Technical Manual. Each facility should include only those items in the permitted final cover design. In the event that the facility has not modified its permit to include a final cover system that complies with 22.1301(a), it should include at least those items on the sample estimate detail that are not shown as optional.

VI. POST-CLOSURE COST ESTIMATE

Items to be included in the post-closure care cost estimate are provided in 22.1403(a) and are as follows:

- A. The cost estimate shall include monitoring and maintenance activities described in the post-closure care plan and will include:
1. Costs to make annual repairs required as a result of settling, subsidence, erosion, to prevent run-on and run-off and miscellaneous repairs to roads and security features. Generally this amount can be estimated as the cost of a small construction crew for a period of time each year. For example, depending on the size of the facility, the crew might contain:
 - a. small bulldozer or tractor with operator
 - b. manual labor
 - c. flatbed truck (or small dump truck)
 - d. small tools
 - e. miscellaneous supplies
 2. Maintaining and operating the leachate collection system. This amount will generally consist of three items:
 - a. An amount to maintain the leachate collection system. This will include an annual allowance to account for any costs required to repair system components. The amount may be estimated by multiplying the capital cost of the leachate collection system (pumps, electrical equipment, tanks, etc., but excluding pipes and drainage layers) by a percentage representing the depreciation of each component over its useful life. For example, if the pumps in the leachate collection system have a five year life, the cost of all the pumps should be multiplied by 20%. In no case should the total annual amount under this section total less than 5% of the total capital cost of all depreciable components.
 - b. An amount to transport leachate to a treatment facility. The cost should be based either on historical costs, quotations from a contract carrier, or alternatively seven (7) cents per gallon treated.
 - c. An amount to treat the leachate at a waste treatment plant. This cost should be

based on present disposal costs at the facility or alternatively five (5) cents per gallon treated.

- d. In the event that leachate is treated on site, the treatment costs should include an estimated cost per gallon that includes plant depreciation for the useful life of the facility, estimated operation and maintenance costs, monitoring and permitting costs.
 - e. The volume of leachate to be treated shall be calculated using an approved model for the length of the post closure care period. In no case, shall the initial estimated amount of leachate from an area with composite cover be less than 1/4 inch per acre per year, or less than 1/2 inch per acre per year in area with a clay cover unless the facility can demonstrate that another rate is more appropriate.
3. Monitoring groundwater in accordance with Chapter 12. This amount will generally consist of four components:
- a. An amount to maintain the integrity of the monitoring system. This will include an annual allowance to account for any costs required to repair monitoring wells. This amount shall be based on a percentage of the capital cost of the monitoring system similar to the method described for leachate collection systems in sub-section 2.a. above. The useful life of the monitoring system shall be estimated to be no more than 30 years. The capital cost may be taken from actual installed cost data, or alternatively may be figured at \$5,000 per well.
 - b. An amount to have a third party sample the wells semi-annually. This may be based on actual costs, contractor quotations, or alternatively the facility may use \$250 per well per event. The costs must be consistent with the requirements of 22.1203 and the site's sampling and analysis plan.
 - c. An amount to analyze the groundwater samples analyzed per the requirements of the detection monitoring requirements of 22.1204, plus any additional parameters required by permit. This cost may be based on actual cost, lab quotations, or alternatively the facility may use \$750 per well per event. The costs must be consistent with the requirements of 22.1203 and the site's sampling and analysis plan.
 - d. An amount to have the groundwater results statistically analyzed per the requirements of 22.1203(g) and the site's statistical analysis plan. This cost may be based on actual cost, consultant proposal, or alternatively \$750 per well per event.
 - e. Maintaining and operating the gas monitoring system. This cost will generally contain two parts:
 - f. The cost to maintain components of the gas monitoring system. This will include an annual allowance for costs to repair gas probes and shall be based on a percentage of the capital cost of the monitoring system similar to the method described for leachate collection systems in sub-section 2.a. above. The useful life of the monitoring system shall be estimated to be no more than

30 years. The capital cost may be taken from actual installed cost data, or alternatively may be figured at \$2,000 per probe. In the event that facility has not yet installed gas probes, the number of probes for a facility shall be estimated at one per 1000 feet of landfill perimeter boundary.

- g. The cost to sample quarterly in accordance with 22.514. This may be based on actual costs, contractor quotations, or alternatively the facility may use \$100 per permanent probe per event.

- B. Costs should be based on what it would take for a third party to complete the work.

- C. The cost estimate shall be adjusted annually for inflation.

- D. If conditions change to increase or decrease the cost estimate, then these changes should be documented with revisions to the closure plan. These revisions shall be submitted to the Department for concurrence. (Section III.A.).

- E. The estimate shall be detailed similar to that shown in Table 4. This table estimates costs on an annual basis multiplying the annual costs by 30 to obtain the total cost. Another method may be used if it is more appropriate.

TABLE 1

SAMPLE CLOSURE PLAN

Table of Contents

<u>Section</u>	<u>Title</u>
1.0	INTRODUCTION
2.0	BACKGROUND & LOCATION
3.0	FINAL COVER DESIGN/CONSTRUCTION
3.1	Permitted Final Cover Design
3.2	Construction Specifications
3.3	Quality Assurance/Quality Control
3.4	Erosion Control Measures
4.0	CLOSURE SCENARIOS
4.1	Routine Closure
4.2	Premature Closure
4.3	Maximum Waste Inventory
5.0	CLOSURE SCHEDULE
5.1	Routine Closure
5.2	Premature Closure

6.0 CERTIFICATION AND DEED NOTATIONS

TABLE 2

SAMPLE POST-CLOSURE PLAN

Table of Contents

<u>Section</u>	<u>Title</u>
1.0	INTRODUCTION
2.0	BACKGROUND & LOCATION
3.0	POST-CLOSURE MONITORING/MAINTENANCE
3.1	Inspection Schedule
3.2	Final Cover Maintenance
3.3	Miscellaneous Maintenance
3.4	Leachate Collection System
3.5	Groundwater Monitoring
3.6	Gas Monitoring
4.0	CONTACT PERSONS
5.0	LANDFILL PROPERTY USE
6.0	CERTIFICATION

**TABLE 3
SAMPLE CLOSURE COST ESTIMATE**

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Surface Preparation				
Gas Venting Layer (Optional)				
Clay Cover				
Synthetic Liner				
Gas Vents				
Drainage Layer (Optional)				
Biotic Barrier Layer (Optional)				
Filter Layer (Optional)				
Vegetation/Soil Top Layer				
Erosion Layer				
Seeding/Fertilizing/ Mulching				
Erosion Control				
Quality Assurance/Quality Control				
Surveying				
Certification				

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT

TABLE 4 - SAMPLE POST-CLOSURE COST ESTIMATE

MISCELLANEOUS REPAIRS (SUBSIDENCE, SETTLING, EROSION, ROADS, ETC.)			
Provide Sufficient Detail So That Basis For Costs Can Be Determined			
ITEM	QUANTITY	UNIT PRICE	AMOUNT
TOTAL ANNUAL MISCELLANEOUS REPAIRS			
MAINTAIN/OPERATE LEACHATE COLLECTION SYSTEM			
ITEM	QUANTITY	UNIT PRICE	AMOUNT
Capital Cost of System			
Annual Maintenance/Repair			
Leachate Generation/Yr. (Gal.)			
Annual Transportation Costs			
Annual Treatment Costs			
TOTAL ANNUAL LEACHATE COLLECTION SYSTEM COSTS			
MAINTAIN/OPERATE GROUNDWATER MONITORING SYSTEM			
ITEM	#OF WELLS	COST/WELL	AMOUNT
Capital Cost			
Annual Maintenance/Repair			
Annual Sampling Costs (2/year)			
Annual Analysis (2/year)			
Statistical Analysis (2/year)			
TOTAL ANNUAL GROUNDWATER MONITORING SYSTEM COSTS			
MAINTAIN/OPERATE GAS MONITORING SYSTEM			
ITEM	#OF PROBES	COST/PROBE	AMOUNT

MISCELLANEOUS REPAIRS (SUBSIDENCE, SETTling, EROSION, ROADS, ETC.)
 Provide Sufficient Detail So That Basis For Costs Can Be Determined

Capital Cost			
Annual Maintenance/Repair			
Sampling/Analysis Costs (4/year)			
TOTAL ANNUAL GAS MONITORING SYSTEM COSTS			
TOTAL ANNUAL POST-CLOSURE COSTS Total Above Components			
TOTAL POST-CLOSURE CARE COSTS (Above Cost x 30)			



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From Regulation 22, Solid Waste Management

Section 22.1405 - Allowable Mechanisms to demonstrate Financial Assurance

The mechanisms used to demonstrate financial assurance must ensure that the funds necessary to meet the costs of closure, post-closure care, and corrective action for known releases will be available whenever they are needed. Owners and operators must choose from the options specified in paragraphs (a) through (j) of this section.

(a) **Trust Fund**

- (1) An owner or operator may satisfy the requirements of this section by establishing a trust fund which conforms to the requirements of this paragraph. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency. A copy of the trust agreement must be placed in the facility's operating record.
- (2) Payments into the trust fund must be made annually by the owner or operator over the term of the initial permit or over the remaining life of the permitted facility, whichever is shorter, in the case of a trust fund for closure or post-closure care, or over one-half of the estimated length of the corrective action program in the case of corrective action for known releases. This period is referred to as the pay-in period.
- (3) For a trust fund used to demonstrate financial assurance for closure and post-closure care, the first payment into the fund must be at least equal to the current cost estimate for closure or post-closure care, except as provided in paragraph (j) of this section, divided by the number of years in the pay-in period as defined in paragraph (a)(2) of this section. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{CE}-\text{CV}}{\text{Y}}$$

where CE is the current cost estimate for closure or post-closure care (updated for inflation or other changes), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

- (4) For a trust fund used to demonstrate financial assurance for corrective action, the first payment into the trust fund must be at least equal to one-half of the current cost estimate for corrective action, except as provided in paragraph (j) of this section, divided by the number of years in the corrective action pay-in period as defined in paragraph (a)(2) of this section. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{RB}-\text{CV}}{\text{Y}}$$

where RB is the most recent estimate of the required trust fund balance for corrective action (i.e., the total costs that will be incurred during the second half of the corrective action period), CV is the current value of the trust fund, and Y is the number of years remaining on the pay-in period.

- (5) The initial payment into the trust fund must be made before the initial receipt of waste or before the effective date of this section [April 9, 1997], whichever is later, in the case of closure and post-closure care, or no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with the requirements of Section 22.1408.
- (6) If the owner or operator establishes a trust fund after having used one or more alternate mechanisms specified in this section, the initial payment into the trust fund must be at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to the specifications of this paragraph and (a) of this section, as applicable.
- (7) The owner or operator, or other person authorized to conduct closure, post-closure care, or corrective action activities may request reimbursement from the trustee for these expenditures. Requests for reimbursement will be granted by the trustee only if sufficient funds are remaining in the trust fund to cover the remaining costs of closure, post-closure care, or corrective action, and if justification and documentation of the cost is placed in the operating record. The owner or operator must notify the Director that the documentation of the justification for reimbursement has been placed in the operating record and that reimbursement has been received.
- (8) The trust fund may be terminated by the owner or operator only if the owner or operator substitutes alternate financial assurance as specified in this section or if he is no longer required to demonstrate financial responsibility in accordance with the requirements of §22.1402(b), 22.1403(b), or 22.1404(b).

(b) Surety Bond Guaranteeing Payment or Performance.

- (1) An owner or operator may demonstrate financial assurance for closure or post-closure care by obtaining a payment or performance surety bond which conforms to the requirements of this paragraph. An owner or operator may demonstrate financial assurance for corrective action by obtaining a performance bond which conforms to the requirements of this paragraph. The bond must be effective before the initial receipt of waste or before the effective date of this section, [April 9, 1997], whichever is later, in the case of closure and post-closure care, or no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with the requirements of Section 22.1408. The owner or operator must notify the Director that a copy of the bond has been placed in the operating record. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.
- (2) The penal sum of the bond must be in an amount at least equal to the current closure, post-closure care or corrective action cost estimate, whichever is applicable, except as

provided in (k) of this section.

- (3) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
- (4) The owner or operator must establish a standby trust fund. The standby trust fund must meet the requirements of (a) of this section except the requirements for initial payment and subsequent annual payments specified in (a)(2), (3), (4) and (5) of this section.
- (5) Payments made under the terms of the bond will be deposited by the surety directly into the standby trust fund. Payments from the trust fund must be approved by the trustee.
- (6) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner and operator and to the Director one hundred twenty (120) days in advance of cancellation. If the surety cancels the bond, the owner or operator must obtain alternate financial assurance as specified in this section.
- (7) The owner or operator may cancel the bond only if alternate financial assurance is substituted as specified in this section or if the owner or operator is no longer required to demonstrate financial responsibility in accordance with §§22.1402(b), 258.903(b) or 22.1404(b).

(c) Letter of Credit.

- (1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph. The letter of credit must be effective before the initial receipt of waste or before the effective date of this section, [April 9, 1997], whichever is later, in the case of closure and post-closure care, or no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with the requirements of Section 22.1408. The owner or operator must notify the Director that a copy of the letter of credit has been placed in the operating record. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.
- (2) A letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: name, and address of the facility, and the amount of funds assured, must be included with the letter of credit in the operating record.
- (3) The letter of credit must be irrevocable and issued for a period of at least one year in an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable, except as provided in (a) of this section. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless the issuing institution has canceled the letter of credit by sending notice of cancellation by certified mail to the owner and operator and to the Director one hundred twenty (120) days in advance of cancellation. If the letter of credit is canceled by the issuing institution, the owner or operator must obtain alternate financial assurance.
- (4) The owner or operator may cancel the letter of credit only if alternate financial assurance

is substituted as specified in this section or if the owner or operator is released from the requirements of this section in accordance with §§22.1402(b), 22.1403(b) or 22.1404(b).

(d) Insurance.

- (1) An owner or operator may demonstrate financial assurance for closure and post-closure care by obtaining insurance which conforms to the requirements of this paragraph. The insurance must be effective before the initial receipt of waste or before the effective date of this section, [April 9, 1997], whichever is later. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States. The owner or operator must notify the Director that a copy of the insurance policy has been placed in the operating record.
- (2) The closure or post-closure care insurance policy must guarantee that funds will be available to close the permitted facility whenever final closure occurs or to provide post-closure care for the permitted facility whenever the post-closure care period begins, whichever is applicable. The policy must also guarantee that once closure or post-closure care begins, the insurer will be responsible for the paying out of funds to the owner or operator or other person authorized to conduct closure or post-closure care, up to an amount equal to the face amount of the policy.
- (3) The insurance policy must be issued for a face amount at least equal to the current cost estimate for closure or post-closure care, whichever is applicable, except as provided in (a) of this section. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.
- (4) An owner or operator, or any other person authorized to conduct closure or post-closure care, may receive reimbursements for closure or post-closure expenditures, whichever is applicable. Requests for reimbursement will be granted by the insurer only if the remaining value of the policy is sufficient to cover the remaining costs of closure or post-closure care, and if justification and documentation of the cost is placed in the operating record. The owner or operator must notify the Director that the documentation of the justification for reimbursement has been placed in the operating record and that reimbursement has been received.
- (5) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided that such consent is not unreasonably refused.
- (6) The insurance policy must provide that the insurer may not cancel, terminate or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may cancel the policy by sending notice of cancellation by certified mail to the owner and operator and to the Director one hundred twenty (120) days in advance of cancellation. If the insurer cancels the policy, the owner or operator must obtain alternate financial assurance as specified in this section.
- (7) For insurance policies providing coverage for post-closure care, commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the

face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26-week Treasury securities.

- (8) The owner or operator may cancel the insurance policy only if alternate financial assurance is substituted as specified in this section or if the owner or operator is no longer required to demonstrate financial responsibility in accordance with the requirements of §22.1402(b), 22.1403(b) or 22.1404(b).
- (e) Corporate Financial Test. [reserved]
- (f) Local Government Financial Test. [reserved]
- (g) Corporate Guarantee. [Reserved]
- (h) Local Government Guarantee. [Reserved]
- (i) State Approved Mechanism. An owner or operator may satisfy the requirements of this section by obtaining any other mechanism that meets the criteria specified in (l) of this section, and that is approved by the Director.
- (j) State Assumption of Responsibility. If the Director either assumes legal responsibility for an owner or operator's compliance with the closure, post-closure care and corrective action requirements of this part, or assures that the funds will be available from State sources to cover the requirements, the owner or operator will be in compliance with the requirements of this section. Any State assumption of responsibility must meet the criteria specified in (l) of this section.
- (k) Use of Multiple Financial Mechanisms. An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. The mechanisms must be as specified in paragraphs (a), (b), (c), (d), (e), (f), (g), (h), (i) and (j) of this section, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable. The financial test and a guarantee provided by a corporate parent, sibling, or grandparent may not be combined if the financial statements of the two firms are consolidated.
- (l) Financial Assurance Sufficiency - The language of the mechanisms listed in paragraphs (a), (b), (c), (d), (e), (f), (g), (h), (i) and (j) of this section must ensure that the instruments satisfy the following criteria:
 - (1) The financial assurance mechanisms must ensure that the amount of funds assured is sufficient to cover the costs of closure, post-closure care, and corrective action for known releases when needed;

- (2) The financial assurance mechanisms must ensure that funds will be available in a timely fashion when needed;
- (3) The financial assurance mechanisms must be obtained by the owner or operator by the effective date of these requirements or prior to the initial receipt of solid waste, whichever is later, in the case of closure and post-closure care, and no later than one hundred twenty (120) days after the corrective action remedy has been selected in accordance with the requirements of Section 22.1208, until the owner or operator is released from the financial assurance requirements under §§22.1402, 22.1403 and 22.1404.
- (4) The financial assurance mechanisms must be legally valid, binding, and enforceable under State and Federal law.

Section 22.1406 - Additional Allowable Mechanisms to demonstrate Financial Assurance

- a. Municipality or County Contract of Obligation - A municipality or county may execute a contract of obligation with the Department. Such contract of obligation shall be a binding agreement on the municipality or county, allowing the Department to collect the required amount from any funds being disbursed or to be disbursed from the State to the municipality or county. The contract shall be filed with the State Commissioner of Revenues.



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 SOLID WASTE MANAGEMENT DIVISION
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Regulation 22 requires all solid waste management facilities to submit annual reports. This guidance sets forth the due dates and reporting requirements for the annual reports.

PART I

The following table is the reporting schedule for all the facilities.

FACILITY TYPE	Beginning of Reporting Period	End of Reporting Period	Report due Date
Class 1 Landfill	January 1	December 31	March 31
Class 3 Landfill	April 1	March 31	June 30
Class 4 Landfill	July 1	June 30	September 30
Transfer Stations	October 1	September 30	December 31
Composting Facilities	October 1	September 30	December 31
Material Recovery Facilities	October 1	September 30	December 31

PART II

This part discusses the reporting requirements for an annual report of all the permitted solid waste management facilities:

I. Class 1 Landfill: A registered professional engineer shall inspect the landfill site and prepare an annual report addressing operational compliance with permit conditions, permit plans, specifications and the narrative. The engineering inspection report shall be submitted annually to the Department by March 31 of every year and shall be accompanied by an updated financial assurance instrument. It shall contain at a minimum:

- A. The volume remaining in the current landfill cell or area and the projected date for opening new cells or areas;
- B. The estimated remaining permitted site life considering the current waste stream;
- C. Compliance of facility fill progression with the approved permit plans, specifications and narrative;
- D. Compliance with the operating requirements of this regulation and permit conditions;
- E. Changes or proposed changes to the operating plan;
- F. Quantity and characteristics of leachate collected and disposed of;
- G. Maintenance of stormwater controls;
- H. Status of capping and closure of completed areas;
- I. Status of remedial or corrective actions taken;
- J. Any other items impacting permit compliance at the landfill; and
- K. An updated closure and post closure cost estimate and the financial assurance instrument.

II. Class 3 Landfill: A registered professional engineer shall inspect the landfill site and prepare an annual report addressing operational compliance with permit conditions, permit plans, specifications and the narrative. The engineering inspection report shall be submitted annually to the Department by June 30 of every year and shall be accompanied by an updated financial assurance instrument. It shall contain at a minimum:

- A. The volume remaining in the current landfill cell or area and the projected date for opening new cells or areas;
- B. The estimated remaining permitted site life considering the current waste stream;
- C. Compliance of facility fill progression with the approved permit plans and specifications, and the narrative;
- D. Compliance with the operating requirements of this regulation and permit conditions;
- E. Changes or proposed changes to the operating plan;
- F. Quantity and characteristics of leachate collected and disposed of;
- G. Maintenance of storm water controls;
- H. Status of capping and closure of completed areas;
- I. Status of remedial or corrective actions taken;
- J. Any other items impacting permit compliance at the landfill; and
- K. An updated closure and post closure cost estimate and the financial assurance instrument.

3. Class 4 Landfill: A registered professional engineer shall inspect the landfill site and prepare an annual report addressing operational compliance with permit conditions, permit plans,

specifications and the narrative. The engineering inspection report shall be submitted annually to the Department by September 30 of every year and shall be accompanied by an updated financial assurance instrument. It shall contain at a minimum:

- A. The volume remaining in the current landfill cell or area and the projected date for opening new cells or areas;
- B. The estimated remaining permitted site life considering the current waste stream.
- C. Compliance of facility fill progression with the approved permit plans and specifications, and narrative;
- D. Compliance with the operating requirements of this regulation and permit conditions;
- E. Changes or proposed changes to the operating plan;
- F. Maintenance of storm water controls;
- G. Status of capping and closure of completed areas;
- H. Status of remedial or corrective actions taken;
- I. Any other items impacting permit compliance at the landfill; and
- J. An updated closure and post closure cost estimate and the financial assurance instrument.

4. **Transfer Stations:** The facility owner or operator shall prepare and file annual reports with the Department by December 31 on a form provided by or acceptable to the Department and will be accompanied by an updated financial assurance instrument. Contents of the reports shall at a minimum include:

- A. Source, volume or weight, and class of solid waste received at the facility;
- B. The volume or weight and type of recyclables recovered, if any; and
- C. The volume or weight of solid waste removed from the facility and the disposal location.
- D. An updated closure and post closure cost estimate and the financial assurance instrument.

5. **Composting Facilities:** The facility owner or operator shall prepare and file annual reports with the Department by December 31 and will be accompanied by an updated financial assurance instrument. Please refer to Section 22.808 of Regulation 22 for contents of the report.

(a) Type Y Facilities - Type Y composting facilities shall keep and retain records of operations and other prescribed information which shall be available for inspection by the Department and shall include at a minimum:

- i) Monitoring results of stormwater runoff and/or site discharges as required by facility NPDES permits.
- ii) Permit, design drawings, operating plan, modifications, Department correspondence.
- iii) Facility operating records as required by Section 22.804(b)(1).
- iv) An updated closure and post closure cost estimate and the financial assurance instrument.

(b) Types O and S Facilities - Types O and S facilities shall keep and retain the following records of operations which shall be available for inspection by the Department.

- A Compost analysis results which include the name of the testing laboratory;
 - i) Quantity, type and source of incoming waste;

- ii) Quantity and types of recovered recyclables, as appropriate;
- iii) Quantity of compost produced;
- iv) Quantity, of compost sold/distributed, and markets;
- v) Quantity of disposed residue, date and location of disposal;
- vi) Daily temperature readings and retention times during PFRP;
- vii) Leachate management records and summaries;
- viii) Records of maintenance to any major equipment or processes;
- ix) Monitoring results of stormwater runoff and/or site discharges as required by facility NPDES permits.
- x) Permit, design drawings, operating plan, modifications, Department correspondence.
- xi) Facility operating records as required by Section 22.804(c)(6).
- xii) An updated closure and post closure cost estimate and the financial assurance instrument.

6. **Material Recovery Facilities:** The facility owner or operator shall prepare and file annual reports with the Department by December 31 on a form provided by or acceptable to the Department. Contents of the reports shall at a minimum include the:

- A. Source, volume or weight, and class of solid waste received at the facility;
- B. The volume, weight and type of recyclables recovered;
- C. The volume or weight of solid waste removed from the facility and the disposal location;
and
- D. The volume or weight of waste removed for composting or refuse derived fuel.

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