

THE RCRA TEST

A. Background

Section 3004(6) of RCRA authorizes EPA to establish financial responsibility standards for owners and operators of hazardous waste management facilities as may be necessary or desirable to protect human health and the environment. That agency first proposed financial responsibility standards for inclusion in Part 264 (general standards to be used in issuing permits) and Part 265 (interim status facilities for existing facilities awaiting final disposition of permit applications). After publishing several Federal Register notices on the proposed standards and evaluating public comments, EPA finally promulgated financial responsibility requirements on April 7, 1982 that included the use of a financial test and corporate guarantee.

B. How the RCRA Test And Corporate Guarantee Work

1. The Financial Test

The EPA regulations promulgated on April, 1982, allowed an owner or operator to satisfy financial assurance operations by demonstrating that either he or his corporate parent meets either of the following sets of criteria:

Alternative I:

- (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 1.5; and
- (B) Net 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 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates.

NAME :	:	:	:	:	:	:
DATE : 85/07/09	:	:	:	:	:	:

Alternative II:

- (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) Tangible net worth of at least \$10 million; and
- (D) Assets in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates.

In developing the financial test, EPA noted that they focused on three goals:

- Funds should be available for closure and post-closure care for protection of human health and the environment;
- As a matter of equity the parties responsible for closure and post-closure obligations, i.e., owners and operators should pay those costs;
- Costs to the regulated community of providing financial assurance should be as low as possible.

2. Comments on the Financial Test

The agency received a number of comments on the tests proposed by EPA in 1980.

- Some commenters felt that minimum net worth and working capital requirements be higher, lower, or deleted altogether. They also said the reporting requirements were not consistent with other financial reporting requirements, and therefore represented high additional costs.
- Some commenters suggested that each industry should have its own financial test. However, in response, EPA noted that "... a general analysis of industry data and previous studies of the forecasting of financial distress, suggest that a single test can be used for most

NAME :	:	:	:	:	:	:
DATE :	85/07/09	:	:	:	:	:

firms engaged in manufacturing." However, EPA also noted that financial tests found to be valid for distinguishing viable from nonviable firms engaged in manufacturing were often not valid or useful for establishing the viability of firms in industries with unique financial characteristics, such as utilities. For example, positive net working capital is uncommon for electric utilities and firms in some service related industries. In response to those commenters, EPA developed an alternative financial test option, based on bond ratings, that was more appropriate for utilities and firms with similar financial characteristics.

- Some commenters strongly objected to the use of working capital as a test criterion, stating that their industries often did not maintain a positive net working capital position. EPA's analysis found that in manufacturing industries likely to engage in hazardous waste treatment, storage or disposal, "virtually all viable firms maintain positive net working capital. For a manufacturing firm, a negative net working capital position is an excellent indicator that the firm is in a difficult financial situation." The Agency's review of financial data for bankrupt manufacturing firms indicated that the vast majority experienced rapid decline in working capital in the years immediately prior to bankruptcy.

As a result, the Agency decided to require that firms maintain a multiple of the cost estimates in the form of net working capital in one of the two test options. They concluded that firms that satisfy the other test option, which requires an investment-grade bond rating, will have proven access to credit, and therefore, demonstrated viability.

- Some commenters asked that EPA change the common definition of working capital to allow use of existing lines of credit, cash flow, or fixed assets that could be liquidated to satisfy part or all of the net working capital requirements. However, EPA decided to retain their definition of working capital, because some of the alternatives suggested by commenters are not usual line items in financial statements, and so would add to the administrative burden of their regulation. EPA also felt that, given the significance of negative net working capital as an indicator of financial distress, it would be useful to retain net working capital as currently defined, as an element in one of the test alternatives.

NAME :	:	:	:	:	:	:
DATE :	:	:	:	:	:	:

The proposed test of 1980 required owners or operators to have net working capital amounting to twice the cost estimates in order to use the financial test. This was intended to ensure that the payment of closure and post-closure costs could be made before insolvency occurred. However, given the possibility of rapid deterioration in net working capital of a firm experiencing serious financial distress, EPA felt that a higher multiple seemed advisable.

EPA conducted an analysis of firms which had experienced rapid deterioration of their financial condition for two to three years prior to business failure. This analysis showed that net working capital of these firms fell by an average of 66 percent in two years. EPA therefore concluded that in order to ensure that adequate liquid assets (as indicated by net working capital) will be available for closure and post-closure care, that requiring net working capital of at least six times the estimated costs was an appropriate level. This figure was obtained by multiplying the factor of two (to ensure current ability to pay) times three (to ensure against a high rate of deterioration before payment can be brought about.) With a multiple of six, EPA felt that it is likely that even a rapidly deteriorating firm will have net working capital amounting to twice the cost estimates for two years after failing the test.

3. Net worth requirements

The May, 1980 proposed financial test required net worth (total assets minus total liabilities) of at least \$10 million. EPA developed that requirement because the business failure rate for firms with \$10 million or more in net worth was determined to be significantly lower than for firms overall.

EPA also estimated that it would enter into twice as many bankruptcy proceedings to recover funds for closure and post-closure care if the \$10 million in net worth criterion were dropped, even if other criteria were retained. In addition, the number of instances in which the hazardous waste facility itself represents the only significant income-producing asset of an owner or operator will be reduced by a \$10 million in net worth requirement. EPA concluded that since firms with \$10 million or more in net worth are more stable than smaller companies, these larger firms are less likely to abandon their facilities. Furthermore, EPA noted that retaining the \$10 million

NAME :	:	:	:	:	:	:
DATE : 85/07/09	:	:	:	:	:	:

requirement will minimize the burden of administering the financial assurance.

- Several commenters to EPA proposed rules suggested that a firm passing the financial test should be required to have a net worth at least as great as the net working capital requirement.

EPA concluded that while it would be unusual for firms to have less net worth than net working capital, the possibility does exist, and such a firm would be very weak financially. Accordingly, EPA then added a requirement that a firm have a net worth of at least six times the closure and post-closure cost estimates.

- One commenter also recommended that net worth be calculated only on a tangible net worth basis. The agency agreed, concluding that intangibles such as goodwill, patents and trademarks would be difficult to convert into cash to pay for closure or post closure expenses. However, for the financial ratio requirements, net worth rather than tangible net worth is used, since that is customary for financial ratios, which were found to be effective predictors of financial stability.

4. Financial Ratios

EPA's financial ratio required a ratio of total liabilities to net worth of less than 3 to 1. A number of commenters suggested that this ratio was unrealistically high and that cutoff points of 2 to 1 or 1.5 to 1 would be better measures of viability. In reevaluating this requirement, EPA concluded that a ratio of 2 to 1 would be a more appropriate ratio.

5. Evaluation of Alternative Tests

As a result of these and other public comments, EPA did an extensive analysis of various financial tests in order to determine how well they predicted failure rates. They constructed a sample of 178 viable and 66 bankrupt firms that had filed for bankruptcy between 1966 and 1979. A sample of 26 non-bankrupt utilities was also examined. The agency then assembled 300 different financial tests. EPA calculated two measures of effectiveness for each test: the likely rate of

U. S. :	:	:	:	:	:	:
NAME :	:	:	:	:	:	:
DATE :85/07/09 :	:	:	:	:	:	:

bankruptcy for firms passing the test, and the percentage of viable firms that would be able to use the financial test as an option.

EPA concluded that the effectiveness of tests in eliminating firms in the bankrupt firm sample varied. The agency identified 16 "best test" options. However, the agency eliminated all those without the \$10 million in net worth requirements, because they had already concluded that such a requirement was absolutely necessary for assuring that funds would be available for closure and post-closure care.

Of the tests requiring \$10 million in tangible net worth, the one which resulted in the lowest sum of direct public and private costs was selected as one of the financial test options. It requires that an owner or operator have \$10 million in tangible net worth, have tangible net worth and net working capital each at least six times the sum of closure and post-closure costs, and also to pass two of the following three ratio tests: 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 .1; and a ratio of current assets to current liabilities greater than 1.5.

The corporate parent must also have assets in the United States amounting to at least 90 percent of total assets or at least six times the sum of the closure and post-closure cost estimates. This requirement was added to help ensure accessibility to funds in the event of bankruptcy or other default. EPA chose the 90% figure rather than 100%, because they felt that it would save some companies added reporting costs while simultaneously providing equivalent assurance.

The standards of the American Institute of Certified Public Accounts provide that information about the identifiable assets to a firm's foreign operations would be included in its financial statements if those assets are 10 percent or more of total assets.

The Securities and Exchange Commission also requires that firms filing Form 10K reports are to indicate those assets located outside the United States if those assets are 10 percent or more. EPA thus concluded that a firm with less than 10 percent

U.	:	:	:	:	:	:
NAME	:	:	:	:	:	:
DATE :85/07/09	:	:	:	:	:	:

of its assets outside the country and filing a Form 10K will not have to take the additional step of identifying the exact amount of assets in the United States, in order to meet this requirement of the financial test.

The alternate test also requires bond ratings. EPA did an analysis of available data on the performance of the two major bond rating services (Moody's and Standard and Poor's) and concluded that firms receiving any of the four highest ratings (i.e., investment-grade bonds) have compiled a record of financial strength at least equal to that indicated by meeting the criteria of the first test option. In order to ensure that adequate assets are available to cover possible closure and post-closure expenditures, a firm using the bond ratings test must also have (1) tangible net worth amounting to at least six times the sum of closure and post-closure cost estimates and (2) assets in the United States must represent at least 90 percent of total assets or at least six times the sum of cost estimates.

In its analysis of ratings to consider for using in the financial test, EPA focused on bond ratings because they relate to long term debt, and closure and post-closure costs are generally long term obligations. The agency concluded that allowing the use of a financial test would significantly reduce the overall costs of its regulations. They noted that as many as 96% of currently viable firms with \$10 million in net worth would pass the test. The agency concluded that only a very small percentage of the firms that pass this test could be expected to go bankrupt without providing alternative financial assurance (.01 percent).

THE CORPORATE GUARANTEE

The EPA proposed regulations allowed an owner or operator to meet the financial assurance requirements by obtaining a guarantee from another party that met the financial test requirements. EPA adopted a definition of parent and subsidiary (a parent must own at least 50% of the voting stock of the subsidiary). EPA chose the criteria of at least 50% in order to ensure that the connection between the parent and subsidiary is close and direct. They noted, "The parent company is likely to have a strong interest in the satisfactory performance of its subsidiary, and this incentive strengthens the guarantee, in the Agency's view."

U.	:	:	:	:	:	:
NAME :	:	:	:	:	:	:
DATE :85/07/09	:	:	:	:	:	:

Under the EPA proposed regulations, the parent-guarantor must meet the same requirements as an owner or operator in using the financial test. He also has an independent contractual obligation to EPA. In effect, "he stands in the shoes" of the owner or operator, as far as assurance for closure or post-closure is concerned, through this guarantee. If the owner or operator doesn't perform closure or post-closure care as required, the guarantor must do so or fund a trust fund in the full amount of the cost estimates in the name of the owner or operator. If the guarantor fails the test, or is disallowed from continuing as a guarantor because of qualifications in the auditor's opinion of the guarantor's financial statements, the guarantor must provide alternate assurance in the name of the owner or operator, if the owner or operator himself does not do so.

EPA noted that the cancellation provisions for a guarantee are comparable to those of the surety bonds and letters of credit. The guarantor must give a 120 day notice of cancellation to the owner or operator and the Regional Administrator by certified mail. If the owner or operator fails to establish alternate financial assurance and to also obtain the Regional Administrator's written approval of this assurance within 90 days after the notice is received, the guarantor must provide another financial assurance mechanism in the name of the owner or operator.

A. NRC Staff-Proposed Modifications To RCRA Corporate Guarantee and Financial Test

In considering the use of a RCRA based financial test and corporate guarantee as an acceptable mechanism for uranium milling licensees to meet their bonding requirements, what changes, if any, should the NRC staff consider? Probably the most basic consideration that we need to consider is the extent to which the RCRA standards which were developed for parent companies or companies operating a hazardous waste facilities should also apply to parent companies guaranteeing reclamation at NRC licensed uranium milling facilities operated by their subsidiaries. A review of the EPA background documents and the Statement of considerations accompanying their April 7, 1982 regulations indicates that EPA's research into bankruptcy of companies was broad-based, and not limited to just hazardous waste facilities. For example, their review of financial tests focused on large, (assets of at least \$10 million) diverse companies.

At this time, it is not possible to say if parent companies of uranium milling licensees have the same characteristics as the large, diverse firms considered in EPA's studies. It was my understanding that URFO staff guessed that most of the parent companies were either

UIC :	:	:	:	:	:	:
NAME :	:	:	:	:	:	:
DATE :	85/07/09	:	:	:	:	:

large, diversified companies, such as Union Carbide, or electric utilities. However, in order to arrive at a better understanding of the characteristics of these parent companies, I have prepared a memo (attached) asking URFO to provide us with the names of these parent companies. We can then obtain annual reports of these companies and review them to see if they are similar to those companies evaluated by EPA in their studies of financial tests and corporate guarantees. (Union Carbide is the only parent company that we now have an annual report for, and it indicates that at this time, the company appears to be a large, highly diversified operation.)

At this time, I think that it is appropriate for us to keep EPA's version of a financial test and corporate guarantee in the BTP for the following reasons:

1. Traditionally, financial tests are used to provide investors with a snapshot view of a company's financial strengths and weaknesses. However, it seems reasonable that slightly different criteria should be considered when financial tests are used for a different purpose, i.e., as a means of ensuring that certain regulatory requirements are met. EPA's development of financial responsibility standards was predicated on the need to protect public health and safety and the environment (See Section 3004(6) of RCRA).

Since NRC's development of financial responsibility standards are also based on goals that are similar to EPA's, I think it makes sense for the agency to consider the adoption of financial tests that are at least as stringent as those developed by the EPA. Furthermore, I felt that EPA's background documents indicated that when several alternative financial tests were evaluated, that the agency often seemed to select the more stringent financial test or ratio. For example, in their evaluation of alternative financial tests, EPA concluded that the test they had selected would fail to identify firms who later would go bankrupt only .01 percent of the time.

2. As was noted earlier, EPA's analyses of tests to identify firms experiencing bankruptcy and rapid deterioration was not restricted to just hazardous waste companies, but also included analyses of broad-based manufacturing firms. It appears that parents of NRC uranium milling licensees may share similar industry characteristics.
3. EPA's financial test also provides flexibility by allowing an alternative financial test for parent companies with low amounts of net working capital, such as electric utilities. This alternative

U.	:	:	:	:	:	:	:
NAME	:	:	:	:	:	:	:
DATE	:	:	:	:	:	:	:

test is particularly appropriate for certain parents of the uranium industry, since I understand that at least one parent company of an NRC uranium licensee is an electric utility.

- 4. EPA's standards for a financial test and corporate guarantee were based on extensive studies prepared by several contractors. Moreover, as part of the entire EPA rulemaking package, the financial responsibility requirements are the result of an extensive public comment period. EPA solicited input and received many comments from the financial and accounting community. EPA then used this input to modify the financial responsibility standards. It makes sense for NRC to "piggyback" on EPA's work. By doing so, we utilize that agency's efforts and avoid the need to allocate our own scarce resources.

If a corporate guarantee and financial test is allowed for uranium milling licensees, what modifications does the NRC staff need to make to license conditions? An initial review found several minor changes:

- 1. Section 264.141 of the RCRA requirements included the following definition of "parent corporation"; "a corporation which directly owns at least 50% of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a 'subsidiary' of the parent corporation." Since the NRC regulations lack such a definition, and since such a definition is also not in the financial test, it needs to be included in the license condition.

Additionally, the NRC staff feels that the definition needs to be modified to require that a parent corporation is defined as a corporation which directly owns more than 50% of the voting stock of the corporation which is the facility owner or operator. I believe that such a modification strengthens the corporate guarantee, given the current problems with the uranium industry.

- 2. Section 264.142 of the RCRA requirements discusses cost estimates for closure, and requires the owner or operator to adjust the closure cost estimate for inflation within 30 days after each anniversary of the date on which the first closure cost estimate was prepared. A similar requirement for an annual revision ought to also be incorporated in the license conditions for NRC uranium milling licensees.

NAME :	:	:	:	:	:	:
DATE : 85/07/09	:	:	:	:	:	:

EPA DOCUMENTS REVIEWED

1. April 7, 1982 Federal Register Notice
2. November 30, 1981 EPA Appendix A, Background Document for the Financial Test and Municipal Revenue Test
3. April 25, 1980, EPA, Office of Solid Waste, Background Document, Part 265, Subpart H
4. May 1982, EPA, Office of Solid Waste, Financial Assurance for Closure and Post-Closure Care, A Guidance Document
5. General Research Corporation, "Checking Compliance With the Financial Test Regulation", no date.
6. August 26, 1981, Response to Cooper and Lybrand's "Review of Tests Proposed by the U.S. Environmental Protection Agency"

Mary Jo Seeman,
Financial Analyst

NAME :	M. J. Seeman	:	:	:	:	:
DATE :	85/07/09	:	:	:	:	:

Atlas Corp. Balance Sheet 6-30-86

<u>Assets</u>		Liabilities + Net Worth	
Current	44 million	Liabilities	19 mil
Fixed	51 "	Stockholders Equity	76 "
	<hr/>		<hr/>
TOTAL	<u>95</u> million	TOTAL	<u>95</u> "

43 current assets
 9 current liabilities
 34 net working capital

P+L
 6-30-86
 Sales 49 m
 Cost + Exp 51 m
 Loss 2 m

$$\frac{34}{16} = \underline{\underline{5.7}}$$