

Statement of Financial Accounting Standards No. 143

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Accounting for Asset Retirement Obligations

June 2001



Financial Accounting Standards Board
of the Financial Accounting Foundation
401 MERRITT 7, P.O. BOX 5116, NORWALK, CONNECTICUT 06856-5116

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more useful information because prior-period balance sheet amounts and prior-period income statement amounts would be restated to reflect the provisions of this Statement. However, some rate-regulated entities expressed concern that if restatement resulted in recognition of additional expenses in prior periods, those expenses might not be recovered in current or future rates. The Board decided that a cumulative-effect approach would provide sufficient information if, in addition to disclosure of the pro forma income statement amounts required by paragraphs 19(c), 19(d), and 21 of Opinion 20, an entity also disclosed on a pro forma basis for the beginning of the earliest year presented and for the ends of all years presented the balance sheet amounts for the liability for asset retirement obligations as if this Statement had been applied during all periods affected. Therefore, the Board decided to require a cumulative-effect approach as described in Opinion 20 with additional prior-period balance sheet disclosures.

B91. The Board also considered, but rejected, two simplified approaches to recognition of transition amounts. Both approaches would have required that an entity recognize a liability for an asset retirement obligation at fair value upon initial application of the provisions of this Statement. The difference between the fair value of the obligation and any amount presently recognized in the balance sheet for that obligation would have been recognized as either (a) an increase or a decrease in the associated long-lived asset or (b) a cumulative-effect adjustment in the income statement of the period of initial application of this Statement. Neither of those approaches would have resulted in the recognition of an amount of accumulated depreciation related to an asset retirement cost.

B92. The Board decided that even though the simplified approaches would have been easier to apply than either a cumulative-effect approach or restatement, except for recognition of a liability for an asset retirement obligation at fair value, they would not have provided financial statement information that is consistent with the provisions of this Statement. Furthermore, both of the simplified approaches would have resulted in an arbitrary amount being recognized as either an asset or a cumulative-effect adjustment. The Board agreed that the simplified approaches would have provided less useful financial statement information than either the cumulative-effect approach or restatement.

Appendix C: ILLUSTRATIVE EXAMPLES—RECOGNITION AND MEASUREMENT PROVISIONS

C1. This appendix includes four examples that illustrate the recognition and measurement provisions of this Statement. Example 1 illustrates (a) initial measurement of a liability for an asset retirement obligation using an expected present value technique, (b) subsequent measurement assuming that there are no changes in estimated cash flows, and (c) settlement of the asset retirement obligation liability (ARO liability) at the end of its term. Example 2 is similar to Example 1. However, Example 2 illustrates subsequent measurement of an ARO liability after a change in estimated cash flows. Example 3 highlights the recognition and

measurement provisions of this Statement for an ARO liability that is incurred over more than one reporting period. Example 4 illustrates accounting for asset retirement obligations that are conditional and that have a low likelihood of enforcement.

C2. The examples in this appendix and those in Appendixes D and E incorporate simplified assumptions to provide guidance in implementing this Statement. For instance, Examples 1 and 2 relate to the asset retirement obligation associated with an offshore production platform that also would likely have individual wells and production facilities that would have separate asset retirement obligations. Those examples also assume straight-line depreciation, even though, in practice, depreciation would likely be applied using a units-of-production method. Other simplifying assumptions are used throughout the examples.

Example 1

C3. Example 1 depicts an entity that completes construction of and places into service an offshore oil platform on January 1, 2003. The entity is legally required to dismantle and remove the platform at the end of its useful life, which is estimated to be 10 years. Based on the requirements of this Statement, on January 1, 2003, the entity recognizes a liability for an asset retirement obligation and capitalizes an amount for an asset retirement cost. The entity estimates the initial fair value of the liability using an expected present value technique. The significant assumptions used in that estimate of fair value are as follows:

- a. Labor costs are based on current marketplace wages required to hire contractors to dismantle and remove offshore oil platforms. The entity assigns probability assessments to a range of cash flow estimates as follows:

<u>Cash Flow Estimate</u>	<u>Probability Assessment</u>	<u>Expected Cash Flows</u>
\$100,000	25%	\$ 25,000
125,000	50	62,500
175,000	25	<u>43,750</u>
		<u>\$131,250</u>

- b. The entity estimates allocated overhead and equipment charges using the rate it applies to labor costs for transfer pricing (80 percent). The entity has no reason to believe that its overhead rate differs from those used by contractors in the industry.
- c. A contractor typically adds a markup on labor and allocated internal costs to provide a profit margin on the job. The rate used (20 percent) represents the entity's understanding of the profit that contractors in the industry generally earn to dismantle and remove offshore oil platforms.

- d. A contractor would typically demand and receive a premium (market risk premium) for bearing the uncertainty and unforeseeable circumstances inherent in “locking in” today’s price for a project that will not occur for 10 years. The entity estimates the amount of that premium to be 5 percent of the estimated inflation-adjusted cash flows.
- e. The risk-free rate of interest on January 1, 2003, is 5 percent. The entity adjusts that rate by 3.5 percent to reflect the effect of its credit standing. Therefore, the credit-adjusted risk-free rate used to compute expected present value is 8.5 percent.
- f. The entity assumes a rate of inflation of 4 percent over the 10-year period.

C4. On December 31, 2012, the entity settles its asset retirement obligation by using its internal workforce at a cost of \$351,000. Assuming no changes during the 10-year period in the cash flows used to estimate the obligation, the entity would recognize a gain of \$89,619 on settlement of the obligation:

Labor	\$195,000
Allocated overhead and equipment charges (80 percent of labor)	<u>156,000</u>
Total costs incurred	351,000
ARO liability	<u>440,619</u>
Gain on settlement of obligation	<u>\$ 89,619</u>

Initial Measurement of the ARO Liability at January 1, 2003

	Expected Cash Flows 1/1/03
Expected labor costs	\$131,250
Allocated overhead and equipment charges (.80 × \$131,250)	105,000
Contractor’s markup [.20 × (\$131,250 + \$105,000)]	<u>47,250</u>
Expected cash flows before inflation adjustment	283,500
Inflation factor assuming 4 percent rate for 10 years	<u>1.4802</u>
Expected cash flows adjusted for inflation	419,637
Market-risk premium (.05 × \$419,637)	<u>20,982</u>
Expected cash flows adjusted for market risk	<u>\$440,619</u>
Present value using credit-adjusted risk-free rate of 8.5 percent for 10 years	<u>\$194,879</u>

Interest Method of Allocation

<u>Year</u>	<u>Liability Balance 1/1</u>	<u>Accretion</u>	<u>Liability Balance 12/31</u>
2003	\$194,879	\$16,565	\$211,444
2004	211,444	17,973	229,417
2005	229,417	19,500	248,917
2006	248,917	21,158	270,075
2007	270,075	22,956	293,031
2008	293,031	24,908	317,939
2009	317,939	27,025	344,964
2010	344,964	29,322	374,286
2011	374,286	31,814	406,100
2012	406,100	34,519	440,619

Schedule of Expenses

<u>Year-End</u>	<u>Accretion Expense</u>	<u>Depreciation Expense</u>	<u>Total Expense</u>
2003	\$16,565	\$19,488	\$36,053
2004	17,973	19,488	37,461
2005	19,500	19,488	38,988
2006	21,158	19,488	40,646
2007	22,956	19,488	42,444
2008	24,908	19,488	44,396
2009	27,025	19,488	46,513
2010	29,322	19,488	48,810
2011	31,814	19,488	51,302
2012	34,519	19,488	54,007

Journal Entries

January 1, 2003:

Long-lived asset (asset retirement cost)	194,879	
ARO liability		194,879
To record the initial fair value of the ARO liability		

December 31, 2003–2012:

Depreciation expense (asset retirement cost)	19,488	
Accumulated depreciation		19,488
To record straight-line depreciation on the asset retirement cost		

Accretion expense	Per schedule	
ARO liability		Per schedule
To record accretion expense on the ARO liability		

December 31, 2012:

ARO liability	440,619	
Wages payable		195,000
Allocated overhead and equipment charges (.80 × \$195,000)		156,000
Gain on settlement of ARO liability		89,619
To record settlement of the ARO liability		

Example 2

C5. Example 2 is the same as Example 1 with respect to initial measurement of the ARO liability. In this example, the entity's credit standing improves over time, causing the credit-adjusted risk-free rate to decrease by .5 percent to 8 percent at December 31, 2004.

C6. On December 31, 2004, the entity revises its estimate of labor costs to reflect an increase of 10 percent in the marketplace. In addition, it revises the probability assessments related to those labor costs. The change in labor costs results in an upward revision to the undiscounted cash flows; consequently, the incremental cash flows are discounted at the current rate of 8 percent. All other assumptions remain unchanged. The revised estimate of expected cash flows for labor costs is as follows: