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General

Subsection revised 01-Jul-2009

Combine Subsections

00-1 No updates have been made to this subtopic.

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General

Subsection revised 01-Jul-2009

Combine Subsections

05-1 The Asset **Retirement** and Environmental Obligations Topic includes the following Subtopics:

- a. Overall
- b. Asset Retirement Obligations
- c. Environmental Obligations.

05-2 The sole purpose of the Overall Subtopic is to explain the differences between the other two Subtopics. Subtopic **410-20** provides guidance on accounting for and financial reporting of a liability for an asset retirement obligation (and the associated asset retirement cost) and an environmental remediation liability that results from the normal operation of a long-lived asset (see paragraph **410-20-55-7**). Subtopic **410-30** provides guidance on accounting for and financial reporting of environmental remediation liabilities.

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Retirement

The other-than-temporary removal of a long-lived asset from service. That term encompasses sale, abandonment, recycling, or disposal in some other manner. However, it does not encompass the temporary idling of a long-lived asset. After an entity retires an asset, that asset is no longer under the control of that entity, no longer in existence, or no longer capable of being used in the manner for which the asset was originally acquired, constructed, or developed.

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General

Subsection revised 01-Oct-2012

Combine Subsections

00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
Fair Value (3rd def.)	Added	Accounting Standards Update No. 2012-04	10/01/2012
410-20-55-27	Amended	Accounting Standards Update No. 2012-04	10/01/2012
410-20-55-66	Amended	Accounting Standards Update No. 2012-04	10/01/2012

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General

Subsection revised 01-Jul-2009

Combine Subsections

05-1 This Subtopic establishes accounting standards for recognition and measurement of a liability for an **asset retirement obligation** and the associated **asset retirement cost**. This Subtopic also addresses the accounting for an environmental

remediation liability that results from the normal operation of a long-lived asset.

05-2 Paragraph Not Used

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General

Subsection revised 01-Jul-2009

Combine Subsections

> Entities

15-1 The guidance in this Subtopic applies to all entities, including rate-regulated entities that meet the criteria for application of Subtopic 980-10, as provided in paragraph 980-10-15-2. Paragraphs 980-340-25-1 and 980-405-25-1 provide specific conditions that must be met to recognize a regulatory asset and a regulatory liability, respectively. (See paragraphs 410-20-55-1 through 55-12 and 410-20-55-21 through 55-22 for implementation guidance)

> Transactions

15-2 The guidance in this Subtopic applies to the following transactions and activities:

- a. **Legal obligations** associated with the **retirement** of a tangible long-lived asset that result from the acquisition, construction, or development and (or) the normal operation of a long-lived asset, including any legal obligations that require **disposal** of a replaced part that is a component of a tangible long-lived asset.
- b. An environmental remediation liability that results from the normal operation of a long-lived asset and that is associated with the retirement of that asset. The fact that partial settlement of an obligation is required or performed before full retirement of an asset does not remove that obligation from the scope of this Subtopic. If environmental contamination is incurred in the normal operation of a long-lived asset and is associated with the retirement of that asset, then this Subtopic will apply (and Subtopic 410-30 will not apply) if the entity is legally obligated to treat the contamination.
- c. A conditional obligation to perform a retirement activity. Uncertainty about the timing of settlement of the **asset retirement obligation** does not remove that obligation from the scope of this Subtopic but will affect the measurement of a liability for that obligation (see paragraph 410-20-25-10).
- d. Obligations of a lessor in connection with leased property that meet the provisions in (a). Paragraph 840-10-25-16 requires that lease classification tests performed in accordance with the requirements of Subtopic 840-10 incorporate the requirements of this Subtopic to the extent applicable.
- e. The costs associated with the retirement of a specified asset that qualifies as historical waste equipment as defined by EU Directive 2002/96/EC. (See paragraphs 410-20-55-23 through 55-30 and Example 4 [paragraph 410-20-55-63] for illustration of this guidance.) Paragraph 410-20-55-24 explains how the Directive distinguishes between new and historical waste and provides related implementation guidance.

15-3 The guidance in this Subtopic does not apply to the following transactions and activities:

- a. Obligations that arise solely from a plan to sell or otherwise dispose of a long-lived asset covered by Subtopic 360-10.
- b. An environmental remediation liability that results from the improper operation of a long-lived asset (see Subtopic 410-30). Obligations resulting from improper operations do not represent costs that are an integral part of the tangible long-lived asset and therefore should not be accounted for as part of the cost basis of the asset. For example, a certain amount of spillage may be inherent in the normal operations of a fuel storage facility, but a catastrophic accident caused by noncompliance with an entity's safety procedures is not. The obligation to clean up the spillage resulting from the normal operation of the fuel storage facility is within the scope of this Subtopic. The obligation to clean up after the catastrophic

accident results from the improper use of the facility and is not within the scope of this Subtopic.

- c. Activities necessary to prepare an asset for an alternative use as they are not associated with the retirement of the asset.
- d. Historical waste held by private households. (The guidance in this paragraph does not pertain to an asset retirement obligation in the scope of this Subtopic.) For guidance on accounting for historical electronic equipment waste held by private households for obligations associated with Directive 2002/96/EC on Waste Electrical and Electronic Equipment adopted by the European Union, see Subtopic [720-40](#).
- e. Obligations of a lessee in connection with leased property, whether imposed by a lease agreement or by a party other than the lessor, that meet the definition of either minimum lease payments or contingent rentals in paragraphs [840-10-25-4 through 25-7](#). Those obligations shall be accounted for by the lessee in accordance with the requirements of Subtopic [840-10](#). However, if obligations of a lessee in connection with leased property, whether imposed by a lease agreement or by a party other than the lessor, meet the provisions in paragraph [410-20-15-2](#) but do not meet the definition of either minimum lease payments or contingent rentals in paragraphs [840-10-25-4 through 25-7](#), those obligations shall be accounted for by the lessee in accordance with the requirements of this Subtopic.
- f. An obligation for asbestos removal that results from the other-than-normal operation of an asset. Such an obligation may be subject to the provisions of Subtopic [410-30](#).
- g. Costs associated with complying with funding or assurance provisions. Paragraph [410-20-35-9](#) otherwise addresses the measurement effects of funding and assurance provisions.
- h. Obligations associated with maintenance, rather than retirement, of a long-lived asset.
- i. The cost of a replacement part that is a component of a long-lived asset.

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Accretion Expense

An amount recognized as an expense classified as an operating item in the statement of income resulting from the increase in the carrying amount of the liability associated with the asset retirement obligation.

Asset Retirement Cost

The amount capitalized that increases the carrying amount of the long-lived asset when a liability for an asset retirement obligation is recognized.

Asset Retirement Obligation

An obligation associated with the retirement of a tangible long-lived asset.

Conditional Asset Retirement Obligation

A legal obligation to perform an asset retirement activity in which the timing and (or) method of settlement are conditional on a future event that may or may not be within the control of the entity.

Legal Obligation

An obligation that a party is required to settle as a result of an existing or enacted law, statute, ordinance, or written or oral contract or by legal construction of a contract under the doctrine of promissory estoppel.

Promissory Estoppel

"The principle that a promise made without consideration may nonetheless be enforced to prevent injustice if the promisor should

have reasonably expected the promisee to rely on the promise and if the promisee did actually rely on the promise to his or her detriment." (See Black's Law Dictionary, seventh edition.)

Retirement

The other-than-temporary removal of a long-lived asset from service. That term encompasses sale, abandonment, recycling, or disposal in some other manner. However, it does not encompass the temporary idling of a long-lived asset. After an entity retires an asset, that asset is no longer under the control of that entity, no longer in existence, or no longer capable of being used in the manner for which the asset was originally acquired, constructed, or developed.

Closure

Related to the Resource Conservation and Recovery Act of 1976: the process in which the owner-operator of a hazardous waste management unit discontinues active operation of the unit by treating, removing from the site, or disposing of on site all hazardous wastes in accordance with an Environmental Protection Agency or state-approved plan. Included, for example, are the process of emptying, cleaning, and removing or filling underground storage tanks and the capping of a landfill. Closure entails specific financial guarantees and technical tasks that are included in a closure plan and must be implemented.

Disposal

Related to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the Resource Conservation and Recovery Act of 1976: under the Resource Conservation and Recovery Act of 1976, the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. Similarly under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 with regard to hazardous substances.

Hazardous Waste

Related to Resource Conservation and Recovery Act of 1976: a waste, or combination of wastes, that because of its quantity, concentration, toxicity, corrosiveness, mutagenicity or inflammability, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Technically, those wastes that are regulated under the Resource Conservation and Recovery Act of 1976 40 CFR Part 261 are considered to be hazardous wastes.

Natural Resources

Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, natural resources are defined as land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed or held in trust by, or otherwise controlled by the United States, state or local governments, foreign governments, or Indian tribes.

Discount Rate Adjustment Technique

A present value technique that uses a risk-adjusted discount rate and contractual, promised, or most likely cash flows.

Fair Value

The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

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General

Subsection revised 01-Jul-2009

Combine Subsections

> Background for Recognition

25-1 Paragraph 35 of FASB Concepts Statement No. 6, Elements of Financial Statements, defines a liability as follows {Note: The indented text below is reproduced from FASB Concepts Statement No. 6 and includes editorial changes for internal consistency within the Codification}.

Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.

25-2 Probable is used with its usual general meaning, rather than in a specific accounting or technical sense (such as that in paragraph 450-20-25-1), and refers to that which can reasonably be expected or believed on the basis of available evidence or logic but is neither certain nor proved (Webster's New World Dictionary). Its inclusion in the definition is intended to acknowledge that business and other economic activities occur in an environment characterized by uncertainty in which few outcomes are certain (see paragraphs 44 through 48 of FASB Concepts Statement No. 6).

25-3 As stated in the preceding paragraph, the definition of a liability in Concepts Statement 6 uses the term *probable* in a different sense than it is used in paragraph 450-20-25-1. As used in Topic 450, probable requires a high degree of expectation. The term probable in the definition of a liability, however, is intended to acknowledge that business and other economic activities occur in an environment in which few outcomes are certain.

25-3A Paragraph 410-20-40-3 states that providing assurance that an entity will be able to satisfy its asset retirement obligation does not satisfy or extinguish the related liability.

> Fair Value Is Reasonably Estimated

25-4 An entity shall recognize the fair value of a liability for an **asset retirement obligation** in the period in which it is incurred if a reasonable estimate of fair value can be made. If a reasonable estimate of fair value cannot be made in the period the asset retirement obligation is incurred, the liability shall be recognized when a reasonable estimate of fair value can be made. If a tangible long-lived asset with an existing asset retirement obligation is acquired, a liability for that obligation shall be recognized at the asset's acquisition date as if that obligation were incurred on that date.

25-5 Upon initial recognition of a liability for an asset retirement obligation, an entity shall capitalize an **asset retirement cost** by increasing the carrying amount of the related long-lived asset by the same amount as the liability. Paragraph 835-20-30-5 explains that capitalized asset retirement costs do not qualify as expenditures for purposes of applying Subtopic 835-20.

25-6 An entity shall identify all its asset retirement obligations. An entity has sufficient information to reasonably estimate the fair value of an asset retirement obligation if any of the following conditions exist:

- a. It is evident that the fair value of the obligation is embodied in the acquisition price of the asset.
- b. An active market exists for the transfer of the obligation.
- c. Sufficient information exists to apply an expected present value technique.

> Obligations with Uncertainty in Timing or Method of Settlement

25-7 The obligation to perform the asset retirement activity is unconditional even though uncertainty exists about the timing and (or) method of settlement. Thus, the timing and (or) method of settlement may be conditional on a future event. Accordingly, an entity shall recognize a liability for the fair value of a **conditional asset retirement obligation** if the fair value of the liability can be reasonably estimated. In some cases, sufficient information about the timing and (or) method of settlement may not be available to reasonably estimate fair value. An expected present value technique incorporates uncertainty about the timing and method of settlement into the fair value measurement. Uncertainty is factored into the measurement of the fair value of the liability through assignment of probabilities to cash flows.

25-8 An entity would have sufficient information to apply an expected present value technique and therefore an asset retirement obligation would be reasonably estimable if either of the following conditions exists:

- a. The settlement date and method of settlement for the obligation have been specified by others. For example, the law, regulation, or contract that gives rise to the **legal obligation** specifies the settlement date and method of settlement. In this situation, the settlement date and method of settlement are known and therefore the only uncertainty is whether the obligation will be enforced (that is, whether performance will be required). In certain cases, determining the settlement

date for the obligation that has been specified by others is a matter of judgment that depends on the relevant facts and circumstances. For example, a contract that provides the entity with an ability to extend its term through renewal should be evaluated to determine whether the settlement date should take into consideration renewal periods. Uncertainty about whether performance will be required does not defer the recognition of an asset retirement obligation because a legal obligation to stand ready to perform the retirement activities still exists, and it does not prevent the determination of a reasonable estimate of fair value because the only uncertainty is whether performance will be required.

b. The information is available to reasonably estimate all of the following:

1. The settlement date or the range of potential settlement dates
2. The method of settlement or potential methods of settlement (The term *potential methods of settlement* refers to methods of settling the obligation that are currently available to the entity. Therefore, uncertainty about future methods yet to be developed would not prevent the entity from estimating the fair value of the asset retirement obligation.)
3. The probabilities associated with the potential settlement dates and potential methods of settlement. (The entity should have a reasonable basis for assigning probabilities to the potential settlement dates and potential methods of settlement to reasonably estimate the fair value of the asset retirement obligation. If the entity does not have a reasonable basis of assigning probabilities, it is expected that the entity would still be able to reasonably estimate fair value when the range of time over which the entity may settle the obligation is so narrow and (or) the cash flows associated with each potential method of settlement are so similar that assigning probabilities without having a reasonable basis for doing so would not have a material impact on the fair value of the asset retirement obligation.)

25-9 In many cases, the determination as to whether the entity has the information to reasonably estimate the fair value of the asset retirement obligation is a matter of judgment that depends on the relevant facts and circumstances. It is expected that the narrower the range of time over which the entity may settle the obligation and the fewer potential methods of settlement the entity has available to it, the more likely it is that the entity will have the information to reasonably estimate the fair value of an asset retirement obligation. For an illustration of this guidance, see Example 3 (paragraph 410-20-55-47).

25-10 Instances may occur in which insufficient information to estimate the fair value of an asset retirement obligation is available. For example, if an asset has an indeterminate useful life, sufficient information to estimate a range of potential settlement dates for the obligation might not be available. In such cases, the liability would be initially recognized in the period in which sufficient information exists to estimate a range of potential settlement dates that is needed to employ a present value technique to estimate fair value.

25-11 Examples of information that is expected to provide a basis for estimating the potential settlement dates, potential methods of settlement, and the associated probabilities include, but are not limited to, information that is derived from the entity's past practice, industry practice, management's intent, or the asset's estimated economic life. The estimated economic life of the asset might indicate a potential settlement date for the asset retirement obligation. However, the original estimated economic life of the asset may not, in and of itself, establish that date because the entity may intend to make improvements to the asset that could extend the life of the asset or the entity could defer settlement of the obligation beyond the economic life of the asset. In those situations, the entity would look beyond the economic life of the asset in determining the settlement date or range of potential settlement dates to use when estimating the fair value of the asset retirement obligation.

25-12 An asset retirement obligation may result from the acquisition, construction, or development and (or) normal operation of a long-lived asset that has an indeterminate useful life and thereby an indeterminate settlement date for the asset retirement obligation.

25-13 If a current law, regulation, or contract requires an entity to perform an asset retirement activity when an asset is dismantled or demolished, there is an unambiguous requirement to perform the retirement activity even if that activity can be indefinitely deferred. At some time deferral will no longer be possible, because no tangible asset will last forever (except land). Therefore, the obligation to perform the asset retirement activity is unconditional even though uncertainty exists about the timing and (or) method of settlement.

> Uncertainty in Performance Obligations

25-14 This Subtopic requires recognition of a conditional asset retirement obligation before the event that either requires or waives performance occurs. Uncertainty surrounding conditional performance of the retirement obligation is factored into its measurement by assessing the likelihood that performance will be required. In situations in which the conditional aspect has only 2 outcomes and there is no information about which outcome is more probable, a 50 percent likelihood for each outcome shall be used until additional information is available.

25-15 An unambiguous requirement that gives rise to an asset retirement obligation coupled with a low likelihood of required

performance still requires recognition of a liability. Uncertainty about the conditional outcome of the obligation is incorporated into the measurement of the fair value of that liability, not the recognition decision. Uncertainty about performance of conditional obligations shall not prevent the determination of a reasonable estimate of fair value. A past history of nonenforcement of an unambiguous obligation does not defer recognition of a liability, but its measurement is affected by the uncertainty over the requirement to perform retirement activities.

> Acquired Asset Retirement Obligations

25-16 If a tangible long-lived asset with an existing asset retirement obligation is acquired, a liability for that obligation shall be recognized at the asset's acquisition date as if that obligation were incurred on that date.

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General

Subsection revised 01-Jul-2009

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> Determination of a Reasonable Estimate of Fair Value

30-1 An expected present value technique will usually be the only appropriate technique with which to estimate the fair value of a liability for an **asset retirement obligation**. An entity, when using that technique, shall discount the expected cash flows using a credit-adjusted risk-free rate. Thus, the effect of an entity's credit standing is reflected in the discount rate rather than in the expected cash flows. Proper application of a **discount rate adjustment technique** entails analysis of at least two liabilities—the liability that exists in the marketplace and has an observable interest rate and the liability being measured. The appropriate rate of interest for the cash flows being measured shall be inferred from the observable rate of interest of some other liability, and to draw that inference the characteristics of the cash flows shall be similar to those of the liability being measured. Rarely, if ever, would there be an observable rate of interest for a liability that has cash flows similar to an asset retirement obligation being measured. In addition, an asset retirement obligation usually will have uncertainties in both timing and amount. In that circumstance, employing a discount rate adjustment technique, where uncertainty is incorporated into the rate, will be difficult, if not impossible. See paragraphs **410-20-55-13 through 55-17** and Example 2 (paragraph **410-20-55-35**). For further information on present value techniques, see the guidance beginning in paragraph **820-10-55-4**.

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General

Subsection revised 01-Jul-2009

[Combine Subsections](#)

> Allocation of Asset Retirement Cost

35-1 A liability for an **asset retirement obligation** may be incurred over more than one reporting period if the events that create the obligation occur over more than one reporting period. Any incremental liability incurred in a subsequent reporting period shall be

considered to be an additional layer of the original liability. Each layer shall be initially measured at fair value. For example, the liability for decommissioning a nuclear power plant is incurred as contamination occurs. Each period, as contamination increases, a separate layer shall be measured and recognized. Paragraph 410-20-30-1 provides guidance on using that technique.

35-2 An entity shall subsequently allocate that **asset retirement cost** to expense using a systematic and rational method over its useful life. Application of a systematic and rational allocation method does not preclude an entity from capitalizing an amount of asset retirement cost and allocating an equal amount to expense in the same accounting period. For example, assume an entity acquires a long-lived asset with an estimated life of 10 years. As that asset is operated, the entity incurs one-tenth of the liability for an asset retirement obligation each year. Application of a systematic and rational allocation method would not preclude that entity from capitalizing and then expensing one-tenth of the asset retirement costs each year.

35-3 In periods subsequent to initial measurement, an entity shall recognize period-to-period changes in the liability for an asset retirement obligation resulting from the following:

- a. The passage of time
- b. Revisions to either the timing or the amount of the original estimate of undiscounted cash flows.

35-4 An entity shall measure and incorporate changes due to the passage of time into the carrying amount of the liability before measuring changes resulting from a revision to either the timing or the amount of estimated cash flows.

35-5 An entity shall measure changes in the liability for an asset retirement obligation due to passage of time by applying an interest method of allocation to the amount of the liability at the beginning of the period. The interest rate used to measure that change shall be the credit-adjusted risk-free rate that existed when the liability, or portion thereof, was initially measured. That amount shall be recognized as an increase in the carrying amount of the liability and as an expense classified as **accretion expense**. Paragraph 835-20-15-7 states that accretion expense related to exit costs and asset retirement obligations shall not be considered to be interest cost for purposes of applying Subtopic 835-20.

35-6 The subsequent measurement provisions require an entity to identify undiscounted estimated cash flows associated with the initial measurement of a liability. Therefore, an entity that obtains an initial measurement of fair value from a market price or from a technique other than an expected present value technique must determine the undiscounted cash flows and estimated timing of those cash flows that are embodied in that fair value amount for purposes of applying the subsequent measurement provisions. Example 1 (see paragraph 410-20-55-31) provides an illustration of the subsequent measurement of a liability that is initially obtained from a market price. (See paragraph 410-20-25-14 for a discussion on conditional outcomes.)

35-7 Paragraph 410-20-25-14 explains how uncertainty surrounding conditional performance of a retirement obligation is factored into its measurement by assessing the likelihood that performance will be required. As the time for notification approaches, more information and a better perspective about the ultimate outcome will likely be obtained. Consequently, reassessment of the timing, amount, and probabilities associated with the expected cash flows may change the amount of the liability recognized. See paragraphs 410-20-55-18 through 55-19.

> Change in Estimate

35-8 Changes resulting from revisions to the timing or the amount of the original estimate of undiscounted cash flows shall be recognized as an increase or a decrease in the carrying amount of the liability for an asset retirement obligation and the related asset retirement cost capitalized as part of the carrying amount of the related long-lived asset. Upward revisions in the amount of undiscounted estimated cash flows shall be discounted using the current credit-adjusted risk-free rate. Downward revisions in the amount of undiscounted estimated cash flows shall be discounted using the credit-adjusted risk-free rate that existed when the original liability was recognized. If an entity cannot identify the prior period to which the downward revision relates, it may use a weighted-average credit-adjusted risk-free rate to discount the downward revision to estimated future cash flows. When asset retirement costs change as a result of a revision to estimated cash flows, an entity shall adjust the amount of asset retirement cost allocated to expense in the period of change if the change affects that period only or in the period of change and future periods if the change affects more than one period as required by paragraphs 250-10-45-17 through 45-20 for a change in estimate.

> Effects of Funding and Assurance Provisions

35-9 Methods of providing assurance include surety bonds, insurance policies, letters of credit, guarantees by other entities, and establishment of trust funds or identification of other assets dedicated to satisfy the asset retirement obligation. The existence of funding and assurance provisions may affect the determination of the credit-adjusted risk-free rate. For a previously recognized asset retirement obligation, changes in funding and assurance provisions have no effect on the initial measurement or accretion of that liability, but may affect the credit-adjusted risk-free rate used to discount upward revisions in undiscounted cash flows for that obligation.

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General

Subsection revised 01-Jul-2009

[Combine Subsections](#)**> Settlement of an Asset Retirement Obligation**

40-1 Typically, settlement of an **asset retirement obligation** is not required until the associated asset is retired. However, certain circumstances may exist in which partial settlement of an asset retirement obligation is required or performed before the asset is fully retired. The nature of asset retirement obligations in various industries is such that the obligations are not necessarily satisfied when the current operation or use of the asset ceases. These obligations can be settled during operation of the asset or after the operations cease. The timing of the ultimate settlement of a liability is unrelated to and should not affect its initial recognition in the financial statements provided the obligation is associated with the **retirement** of a tangible long-lived asset.

40-2 Paragraph **410-20-25-14** explains how uncertainty surrounding conditional performance of a retirement obligation is factored into its measurement by assessing the likelihood that performance will be required. If, as time progresses, it becomes apparent that retirement activities will not be required, the liability and the remaining unamortized **asset retirement cost** shall be reduced to zero.

40-3 Providing assurance that an entity will be able to satisfy its asset retirement obligation does not satisfy or extinguish the related liability. The effect of surety bonds, letters of credit, and guarantees is to provide assurance that third parties will provide amounts to satisfy the asset retirement obligations if the entity that has primary responsibility (the obligor) to do so cannot or does not fulfill its obligations. The possibility that a third party will satisfy the asset retirement obligations does not relieve the obligor from its primary responsibility for those obligations. If a third party is required to satisfy asset retirement obligations due to the failure or inability of the obligor to do so directly, the obligor would then have a liability to the third party.

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General

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[Combine Subsections](#)**> Classification of Accretion Expense**

45-1 **Accretion expense** shall be classified as an operating item in the statement of income. An entity may use any descriptor for accretion expense so long as it conveys the underlying nature of the expense.

45-2 See paragraph **230-10-45-17** for additional information about the classification of cash payments for **asset retirement obligations** as operating items on the statement of cash flows.

> Statement of Cash Flows

45-3 Paragraph **230-10-45-17(e)** states that a cash payment made to settle an asset retirement obligation is a cash outflow for operating activities.

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General

Subsection revised 01-Jul-2009

Combine Subsections

50-1 An entity shall disclose all of the following information about its **asset retirement obligations**:

- a. A general description of the asset retirement obligations and the associated long-lived assets
- b. The fair value of assets that are legally restricted for purposes of settling asset retirement obligations
- c. A reconciliation of the beginning and ending aggregate carrying amount of asset retirement obligations showing separately the changes attributable to the following components, whenever there is a significant change in any of these components during the reporting period:
 1. Liabilities incurred in the current period
 2. Liabilities settled in the current period
 3. **Accretion expense**
 4. Revisions in estimated cash flows.

50-2 If the fair value of an asset retirement obligation cannot be reasonably estimated, that fact and the reasons therefor shall be disclosed.

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> Implementation Guidance

>> Determination of Whether a Legal Obligation Exists

55-1 This implementation guidance illustrates Section **410-20-15**. In most cases involving an **asset retirement obligation**, the determination of whether a **legal obligation** exists should be unambiguous. However, in situations in which no law, statute, ordinance, or contract exists but an entity makes a promise to a third party (which may include the public at large) about its

intention to perform **retirement** activities, facts and circumstances need to be considered carefully in determining whether that promise has imposed a legal obligation upon the promisor under the doctrine of **promissory estoppel**. A legal obligation may exist even though no party has taken any formal action. In assessing whether a legal obligation exists, an entity is not permitted to forecast changes in the law or changes in the interpretation of existing laws and regulations. Preparers and their legal advisors are required to evaluate current circumstances to determine whether a legal obligation exists.

55-2 For example, assume an entity operates a manufacturing facility and has plans to retire it within five years. Members of the local press have begun to publicize the fact that when the entity ceases operations at the plant, it plans to abandon the site without demolishing the building and restoring the underlying land. Due to the significant negative publicity and demands by the public that the entity commit to dismantling the plant upon retirement, the entity's chief executive officer holds a press conference at city hall to announce that the entity will demolish the building and restore the underlying land when the entity ceases operations at the plant. Although no law, statute, ordinance, or written contract exists requiring the entity to perform any demolition or restoration activities, the promise made by the entity's chief executive officer may have created a legal obligation under the doctrine of promissory estoppel. In that circumstance, the entity's management (and legal counsel, if necessary) would have to evaluate the particular facts and circumstances to determine whether a legal obligation exists.

55-3 Once an entity determines that a duty or responsibility exists, it will then need to assess whether an obligating event has occurred that leaves it little or no discretion to avoid the future transfer or use of assets. If such an obligating event has occurred, an asset retirement obligation meets the definition of a liability and qualifies for recognition in the financial statements. However, if an obligating event that leaves an entity little or no discretion to avoid the future transfer or use of assets has not occurred, an asset retirement obligation does not meet the definition of a liability and, therefore, should not be recognized in the financial statements.

55-4 Identifying the obligating event is often difficult, especially in situations that involve the occurrence of a series of transactions or other events or circumstances affecting the entity. For example, in the case of an asset retirement obligation, a law or an entity's promise may create a duty or responsibility, but that law or promise in and of itself may not be the obligating event that results in an entity's having little or no discretion to avoid a future transfer or use of assets. An entity must look to the nature of the duty or responsibility to assess whether the obligating event has occurred. For example, in the case of a nuclear power facility, an entity assumes responsibility for decontamination of that facility upon receipt of the license to operate it. However, no obligation to decontaminate exists until the facility is operated and contamination occurs. Therefore, the contamination, not the receipt of the license, constitutes the obligating event.

> > **Expectation of Nonenforcement**

55-5 This implementation guidance illustrates Section **410-20-15**. Contracts between entities may contain an option or a provision that requires one party to the contract to perform retirement activities when an asset is retired. The other party may decide in the future not to exercise the option or to waive the provision to perform retirement activities, or that party may have a history of waiving similar provisions in other contracts. Even if there is an expectation of a waiver or nonenforcement, the contract still imposes a legal obligation. That obligation is included in the scope of this Subtopic. The likelihood of a waiver or nonenforcement will affect the measurement of the liability. For example, consider an entity that owns and operates a landfill. Regulations require that that entity perform capping, **closure**, and postclosure activities. Capping activities involve covering the land with topsoil and planting vegetation. Closure activities include drainage, engineering, and demolition and must be performed prior to commencing the postclosure activities. Postclosure activities, the final retirement activities, include maintaining the landfill once final certification of closure has been received and monitoring the ground and surface water, gas emissions, and air quality. Closure and postclosure activities are performed after the entire landfill ceases receiving waste (that is, after the landfill is retired). However, capping activities are performed as sections of the landfill become full and are effectively retired. The fact that some of the capping activities are performed while the landfill continues to accept waste does not remove the obligation to perform those intermediate capping activities from the scope of this Subtopic.

> > **Acquisition, Construction, or Development of a Long-Lived Asset**

55-6 This implementation guidance illustrates Section **410-20-15**. Whether an obligation results from the acquisition, construction, or development of a long-lived asset should, in most circumstances, be clear. For example, if an entity acquires a landfill that is already in operation, an obligation to perform capping, closure, and postclosure activities results from the acquisition and assumption of obligations related to past normal operations of the landfill. Additional obligations will be incurred as a result of future operations of the landfill.

> > **Normal Operations**

55-7 This implementation guidance illustrates Section **410-20-15**. Whether an obligation results from the normal operation of a long-lived asset may require judgment. Obligations that result from the normal operation of an asset should be predictable and likely of occurring. For example, consider an entity that owns and operates a nuclear power plant. That entity has a legal obligation to perform decontamination activities when the plant ceases operations. Contamination, which gives rise to the obligation, is predictable and likely of occurring and is unavoidable as a result of operating the plant. Therefore, the obligation to perform

decontamination activities at that plant results from the normal operation of the plant.

55-8 For example, a certain amount of spillage may be inherent in the normal operations of a fuel storage facility, but a catastrophic accident caused by noncompliance with an entity's safety procedures is not. The obligation to clean up after the catastrophic accident does not result from the normal operation of the facility and is not within the scope of this Subtopic.

> > Components of a Larger System

55-9 An asset retirement obligation may exist for component parts of a larger system. In some circumstances, the retirement of the component parts may be required before the retirement of the larger system to which the component parts belong.

55-10 For example, consider an aluminum smelter that owns and operates several kilns lined with a special type of brick. The kilns have a long useful life, but the bricks wear out after approximately five years of use and are replaced on a periodic basis to maintain optimal efficiency of the kilns. Because the bricks become contaminated with hazardous chemicals while in the kiln, a state law requires that when the bricks are removed, they must be disposed of at a special **hazardous waste** site. The obligation to dispose of those bricks is within the scope of this Subtopic. The cost of the replacement bricks and their installation are not part of that obligation. This implementation guidance illustrates Section **410-20-15**.

55-11 If assets with asset retirement obligations are components of a larger group of assets (for example, a number of oil wells that make up an entire oil field operation), aggregation techniques may be necessary to derive a collective asset retirement obligation. This Subtopic does not preclude the use of estimates and computational shortcuts that are consistent with the fair value measurement objective when computing an aggregate asset retirement obligation for assets that are components of a larger group of assets. This implementation guidance illustrates paragraph **410-20-30-1**.

> > Obligations with Uncertainty About Government Enforcement

55-12 This implementation guidance illustrates Section **410-20-15**. If, for example, a governmental unit retains the right (an option) to decide whether to require a retirement activity, there is some uncertainty about whether those retirement activities will be required or waived. Regardless of the uncertainty attributable to the option, a legal obligation to stand ready to perform retirement activities still exists, and the governmental unit might require them to be performed. Although the timing and method of settlement of the retirement obligation may depend on future events that may or may not be within the control of the entity, a legal obligation to stand ready to perform retirement activities still exists. The entity should consider the uncertainty about the timing and method of settlement in the measurement of the liability, consistent with a fair value measurement objective, regardless of whether the event that will trigger the settlement is partially or wholly under the control of the entity.

> > Expected Present Value Technique

55-13 This implementation guidance illustrates paragraph **410-20-30-1**. In estimating the fair value of a liability for an asset retirement obligation using an expected present value technique, an entity shall begin by estimating the expected cash flows that reflect, to the extent possible, a marketplace assessment of the cost and timing of performing the required retirement activities. Considerations in estimating those expected cash flows include developing and incorporating explicit assumptions, to the extent possible, about all of the following:

- a. The costs that a third party would incur in performing the tasks necessary to retire the asset
- b. Other amounts that a third party would include in determining the price of the transfer, including, for example, inflation, overhead, equipment charges, profit margin, and advances in technology
- c. The extent to which the amount of a third party's costs or the timing of its costs would vary under different future scenarios and the relative probabilities of those scenarios
- d. The price that a third party would demand and could expect to receive for bearing the uncertainties and unforeseeable circumstances inherent in the obligation, sometimes referred to as a market-risk premium.

55-14 It is expected that uncertainties about the amount and timing of future cash flows can be accommodated by using the expected present value technique and therefore will not prevent the determination of a reasonable estimate of fair value.

> > Credit-Adjusted Risk-Free Rate

55-15 This implementation guidance illustrates paragraph **410-20-30-1**. An entity shall discount expected cash flows using an interest rate that equates to a risk-free interest rate adjusted for the effect of its credit standing (a credit-adjusted risk-free rate). In determining the adjustment for the effect of its credit standing, an entity should consider the effects of all terms, collateral, and existing guarantees on the fair value of the liability.

55-16 Adjustments for default risk can be reflected in either the discount rate or the expected cash flows. In most situations, an entity will know the adjustment required to the risk-free interest rate to reflect its credit standing. Consequently, it would be easier

and less complex to reflect that adjustment in the discount rate.

55-17 In addition, because of the requirements in paragraph [410-20-35-8](#) relating to upward and downward adjustments in expected cash flows, it is essential to the operability of this Subtopic that the credit standing of the entity be reflected in the discount rate. For those reasons, the risk-free rate shall be adjusted for the credit standing of the entity to determine the discount rate.

> > Calculation of Accretion Expense

55-18 This implementation guidance illustrates paragraphs [410-20-35-1 through 35-6](#). In periods subsequent to initial measurement, an entity recognizes the effect of the passage of time on the amount of a liability for an asset retirement obligation. A period-to-period increase in the carrying amount of the liability shall be recognized as an operating item (**accretion expense**) in the statement of income. An equivalent amount is added to the carrying amount of the liability. To calculate accretion expense, an entity shall multiply the beginning of the period liability balance by the credit-adjusted risk-free rate that existed when the liability was initially measured. The liability shall be adjusted for accretion prior to adjusting for revisions in estimated cash flows.

> > Changes in Assumptions and Legal Requirements

55-19 This implementation guidance illustrates paragraph [410-20-35-8](#). Revisions to a previously recorded asset retirement obligation will result from changes in the assumptions used to estimate the expected cash flows required to settle the asset retirement obligation, including changes in estimated probabilities, amounts, and timing of the settlement of the asset retirement obligation, as well as changes in the legal requirements of an obligation. Any changes that result in upward revisions to the expected cash flows shall be treated as a new liability and discounted at the current rate. Any downward revisions to the expected cash flows will result in a reduction of the asset retirement obligation. For downward revisions, the amount of the liability to be removed from the existing accrual shall be discounted at the credit-adjusted risk-free rate that was used at the time the obligation to which the downward revision relates was originally recorded (or the historical weighted-average rate if the year[s] to which the downward revision applies cannot be determined).

55-20 Revisions to the asset retirement obligation result in adjustments of capitalized asset retirement costs and will affect subsequent depreciation of the related asset. Such adjustments are depreciated on a prospective basis.

> > Interim Property Retirements

55-21 This implementation guidance illustrates Section [410-20-15](#). There is no conceptual difference between interim property retirements and replacements and those retirements that occur in circumstances in which the retired asset is not replaced. Therefore, any asset retirement obligation associated with the retirement of or the retirement and replacement of a component part of a larger system qualifies for recognition provided that the obligation meets the definition of a liability. The cost of replacement components is excluded.

55-22 Examples of interim property retirements and replacements for component parts of larger systems are components of transmission and distribution systems (utility poles), railroad ties, a single oil well that is part of a larger oil field, and aircraft engines. The assets in those examples may or may not have associated retirement obligations.

> > Historical Waste on Electrical and Electronic Equipment Associated with EU Directive 2002/96/EC

55-23 EU Directive 2002/96/EC was adopted on February 13, 2003, and directs EU-member countries to adopt legislation to regulate the collection, treatment, recovery, and environmentally sound **disposal** of electrical and electronic waste equipment. The actual legislation adopted by individual EU-member countries can have different requirements. An entity should apply the guidance herein, adjusted as needed for the specific requirements of the applicable EU-member country.

55-24 The Directive distinguishes between new and historical waste. All products put on the market on or before August 13, 2005, are deemed to be historical waste equipment for the purposes of the Directive. Example 4 (see paragraph [410-20-55-63](#)) does not address the accounting for new waste because there should be little diversity in practice in the accounting for such waste. Costs relating to waste of new equipment are to be borne solely by the producers of the new equipment. This implementation guidance illustrates Section [410-20-15](#).

55-25 Under the Directive, the waste management obligation remains with the commercial user until the historical waste equipment is replaced, at which time the waste management obligation for that equipment may be transferred to the producer of the replacement equipment depending on the law adopted by the applicable EU-member country. If the commercial user does not replace the equipment, the obligation remains with that user until it disposes of the equipment. The Directive provides each EU-member country with the option to obligate commercial users to pay part or all of the costs associated with the historical waste even if the equipment is replaced. In this situation, the obligation would remain (partly or wholly) with the commercial user until the user disposes of the equipment.

55-26 The accounting for the initial recognition and measurement of the liability and **asset retirement cost** should be consistent

with paragraphs 410-20-25-1 through 25-4. The ability or intent of the commercial user to replace the asset and transfer the obligation does not relieve the user of its present duty or responsibility to settle the obligation. The replacement of the asset may, depending on EU-member country law, transfer the obligation to the replacement producer, and, if so, that transfer would affect the purchase price of the replacement asset. Upon initial recognition of a liability, an entity shall capitalize an asset retirement cost by increasing the carrying amount of the related asset by the same amount as the liability. The accounting subsequent to the initial recognition of the asset and liability should be consistent with the guidance in paragraphs 410-20-35-3 through 35-8.

55-27 If the asset is subsequently replaced, with the obligation being transferred to the producer of the replacement equipment, the commercial user should determine the portion of the total amount paid to the producer that relates to the replacement equipment (the new asset) and the portion that relates to the transfer of the asset retirement obligation. That determination should be based on the fair value of the asset retirement obligation, without the sale of the new asset. The price paid by the commercial user would not include any costs associated with the transfer of the obligation in situations in which the law in the EU-member country obligates commercial users to pay all of the costs associated with the historical waste even if the equipment is replaced. In those situations, the commercial user would not derecognize the liability from its balance sheet upon replacement, but rather when the obligation is ultimately settled.

55-28 The new asset should be measured as the residual amount (the excess of the price paid over the fair value of the asset retirement obligation transferred). That amount should be used in determining the new asset's cost basis. The commercial user should derecognize the liability from its balance sheet and recognize a gain or loss based on the difference between the carrying amount of the liability at the date of the sale and the portion of the sales price that relates to the obligation. The producer of the new asset should recognize revenue for the total amount received reduced by the fair value of the obligation upon the transfer of the obligation from the commercial user (that is, on a net basis). The requirements for the producer to measure the revenue from the sale of the new asset as the residual amount and recognize revenue only for the sale of the new asset are applicable for those producers for which the recycling of electronic waste equipment is not a revenue-generating business activity. In situations in which the recycling of equipment is a revenue-generating business activity for the producer, that producer should measure the revenue from the sale of the new asset and the assumption of the obligation in accordance with the provisions of Subtopic 605-25.

55-29 The producer of the new asset should derecognize that liability when the obligation is settled.

55-30 See Example 4 (paragraph 410-20-55-63), which describes accounting for obligations associated with Directive 2002/96/EC on Waste Electrical and Electronic Equipment adopted by the European Union. That Example refers to and paraphrases various provisions of the Directive. Nothing in that Example shall be considered a definitive interpretation of any provision of the Directive for any purpose.

> Illustrations

>> Example 1: Subsequent Measurement of a Liability Obtained from a Market Price

55-31 This Example illustrates the guidance in paragraphs 410-20-35-5 through 35-6. After initial measurement, an entity is required to recognize period-to-period changes in an asset retirement obligation liability resulting from the passage of time (accretion expense) and revisions in cash flow estimates. To apply the subsequent measurement provisions of this Subtopic, an entity must identify undiscounted cash flows related to an asset retirement obligation liability irrespective of how the liability was initially measured. Therefore, if an entity obtains the initial fair value from a market price, it must impute undiscounted cash flows from that price.

55-32 This Example illustrates the subsequent measurement of a liability in situations where the initial liability is based on a market price. Assume that the liability is initially recognized at the end of period 0 when the market price is \$300,000 and the entity's credit-adjusted risk-free rate is 8 percent. As required by this Subtopic, revisions in the timing or the amount of estimated cash flows are assumed to occur at the end of the period after accretion on the beginning balance of the liability is calculated. At the end of each period, the following procedure is used to impute cash flows from the end-of-period market price, compute the change in that price attributable to revisions in estimated cash flows, and calculate accretion expense:

- a. The market price and the credit-adjusted risk-free interest rate are used to impute the undiscounted cash flows embedded in the market price.
- b. The undiscounted cash flows from (a) are discounted at the initial credit-adjusted risk-free rate of 8 percent to arrive at the ending balance of the asset retirement obligation liability per the provisions of this Subtopic.
- c. The beginning balance of the asset retirement obligation liability is multiplied by the initial credit-adjusted risk-free rate of 8 percent to arrive at the amount of accretion expense per the provisions of this Subtopic.
- d. The difference between the undiscounted cash flows at the beginning of the period and the undiscounted cash flows at the end of the period represents the revision in cash flow estimates that occurred during the period. If that change is an upward revision to the undiscounted estimated cash flows, it is discounted at the current credit-adjusted risk-free rate. If

that change is a downward revision, it is discounted at the historical weighted-average rate because it is not practicable to separately identify the period to which the downward revision relates.

55-33 The following table illustrates the subsequent measurement of an asset retirement obligation liability obtained from a market price.

Subsequent Measurement of an Asset Retirement Obligation Liability Obtained from a Market Price

	End of Period			
	0	1	2	3
Market assumptions:				
Market price (includes market risk premium)	\$ 300,000	\$ 400,000	\$ 350,000	\$ 380,000
Current risk-free rate adjusted for entity's credit standing	8.00%	7.00%	7.50%	7.50%
Time period remaining	3	2	1	0
Imputed undiscounted cash flows (market price discounted at market rate)	\$ 377,914	\$ 457,960	\$ 376,250	\$ 380,000
Change in undiscounted cash flows	377,914	80,046	(81,710)	3,750
Discount rate:				
Current credit-adjusted risk-free rate (for upward revisions)	8.00%	7.00%		
Historical weighted-average credit-adjusted risk-free rate (for downward revisions)			7.83%	
Change in undiscounted cash flows discounted at credit-adjusted risk-free rate (current rate for upward revisions and historical rate for downward revisions)	\$ 300,000	\$ 69,916	\$ (75,777)	\$ 3,750

55-34 The following table illustrates the measurement of liability under the provisions of the asset retirement obligation statement.

**Measurement of Liability under Provisions of Asset Retirement
Obligation Statement**

<u>Period</u>	<u>Beginning Balance</u>	<u>Accretion (8.0%)</u>	<u>Change in Cash Flows</u>	<u>Ending Balance</u>
0			\$ 300,000	\$300,000
1	\$ 300,000	\$ 24,000		324,000
2	324,000	25,920		349,920
3	349,920	27,994		377,914

<u>Period</u>	<u>Beginning Balance</u>	<u>Accretion (7.0%)</u>	<u>Change in Cash flows</u>	<u>Ending Balance</u>
0				
1			\$ 69,916	\$ 69,916
2	\$ 69,916	\$ 4,894		74,810
3	74,810	5,236		80,046

<u>Period</u>	<u>Beginning Balance</u>	<u>Accretion (7.83%)</u>	<u>Change in Cash Flows</u>	<u>Ending Balance</u>
0				
1				
2			\$ (75,777)	\$ (75,777)
3	\$ (75,777)	\$ (5,933)		(81,710)

<u>Period</u>	<u>Beginning Balance</u>	<u>Accretion</u>	<u>Change in Cash Flows</u>	<u>Ending Balance</u>
0				
1				
2				
3			\$ 3,750	\$ 3,750

<u>Total</u>				
<u>Period</u>	<u>Beginning Balance</u>	<u>Accretion Expense</u>	<u>Change in Cash Flows</u>	<u>Ending Balance</u>
0			\$ 300,000	\$300,000
1	\$ 300,000	\$ 24,000	69,916	393,916
2	393,916	30,814	(75,777)	348,953
3	348,953	27,297	3,750	380,000

>> Example 2: Recognition and Measurement

55-35 The following Cases illustrate the recognition and measurement provisions of this Subtopic:

- Initial measurement of a liability for an asset retirement obligation using an expected present value technique, subsequent measurement assuming that there are no changes in expected cash flows, and settlement of the asset retirement obligation liability at the end of its term (Case A)
- Subsequent measurement of an asset retirement obligation liability after a change in expected cash flows (Case B)
- Recognition and measurement of an asset retirement obligation liability that is incurred over more than one reporting period (Case C)
- Accounting for asset retirement obligations that are conditional and that have a low likelihood of enforcement (Case D).

55-36 Cases A, B, C, and D incorporate simplified assumptions to provide guidance in implementing this Subtopic. For instance, Cases A and B 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 Cases 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 Cases.

>>> Case A: Initial Measurement Using a Present Value Technique, Subsequent Measurement with No Change in Expected Cash Flows

55-37 This Case 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 Subtopic, 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	43,750
		<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 expected cash flows adjusted for inflation.
- 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.

55-38 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 expected cash flows used to estimate the obligation, the entity would recognize a gain of \$89,619 on settlement of the obligation. The entity would account for the asset retirement obligation as follows.

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

Initial Measurement of the Asset Retirement Obligation 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>
Expected present value using credit-adjusted risk-free rate of 8.5 percent for 10 years	<u>\$ 194,879</u>

Interest Method of Allocation

Year	Liability Balance 1/1	Accretion	Liability Balance 12/31
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

Year-End	Accretion Expense	Depreciation Expense	Total Expense
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	
Asset retirement obligation liability		\$ 194,879
To record the initial fair value of the asset retirement obligation 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	
Asset retirement obligation liability		Per schedule
To record accretion expense on the asset retirement obligation liability		

December 31, 2012:

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

> > Case B: Initial Measurement Using a Present Value Technique, Subsequent Measurement with Changes in Expected Cash Flows

55-39 This Case is the same as Case A with respect to initial measurement of the asset retirement obligation liability. In this Case, the entity's credit standing improves over time, causing the credit-adjusted risk-free rate to decrease by 0.5 percent to 8 percent at December 31, 2004.

55-40 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 expected cash flows; consequently, the incremental expected cash flows are discounted at the current credit-adjusted risk-free rate of 8 percent. All other assumptions remain unchanged. The revised estimate of expected cash flows for labor costs is as follows.

<u>Cash Flow Estimate</u>	<u>Probability Assessment</u>	<u>Expected Cash Flows</u>
\$ 110,000	30%	\$ 33,000
137,500	45	61,875
192,500	25	48,125
		<u>\$ 143,000</u>

55-41 On December 31, 2012, the entity settles its asset retirement obligation by using an outside contractor. It incurs costs of \$463,000, resulting in the recognition of a \$14,091 gain on settlement of the obligation. The entity would account for the asset retirement obligation as follows.

Asset retirement obligation liability	\$477,091
Outside contractor	<u>463,000</u>
Gain on settlement of obligation	<u>\$ 14,091</u>

Initial Measurement of the Asset Retirement Obligation 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)]	47,250
Expected cash flows before inflation adjustment	283,500
Inflation factor assuming 4 percent rate for 10 years	1.4802
Expected cash flows adjusted for inflation	419,637
Market-risk premium (.05 × \$419,637)	20,982
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>

Subsequent Measurement of the Asset Retirement Obligation Liability Reflecting a Change in Labor Cost Estimate as of December 31, 2004

	Incremental Expected Cash Flows 12/31/04
Incremental expected labor costs (\$143,000 – \$131,250)	\$ 11,750
Allocated overhead and equipment charges (.80 × \$11,750)	9,400
Contractor's markup [.20 × (\$11,750 + \$9,400)]	4,230
Expected cash flows before inflation adjustment	25,380
Inflation factor assuming 4 percent rate for 8 years	1.3686
Expected cash flows adjusted for inflation	34,735
Market-risk premium (.05 × \$34,735)	1,737
Expected cash flows adjusted for market risk	<u>\$ 36,472</u>
Expected present value of incremental liability using credit-adjusted risk-free rate of 8 percent for 8 years	<u>\$ 19,704</u>

Interest Method of Allocation

<u>Year</u>	<u>Liability Balance 1/1</u>	<u>Accretion</u>	<u>Change in Cash Flow Estimate</u>	<u>Liability Balance 12/31</u>
2003	\$ 194,879	\$ 16,565		\$ 211,444
2004	211,444	17,973	\$ 19,704	249,121 ^(a)
2005	249,121	21,078		270,199
2006	270,199	22,862		293,061
2007	293,061	24,796		317,857
2008	317,857	26,894		344,751
2009	344,751	29,170		373,921
2010	373,921	31,638		405,559
2011	405,559	34,315		439,874
2012	439,874	37,217		477,091

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	21,078	21,951	43,029
2006	22,862	21,951	44,813
2007	24,796	21,951	46,747
2008	26,894	21,951	48,845
2009	29,170	21,951	51,121
2010	31,638	21,951	53,589
2011	34,315	21,951	56,266
2012	37,217	21,951	59,168

(a) The remainder of this table is an aggregation of two layers: the original liability, which is accreted at a rate of 8.5%, and the new incremental liability, which is accreted at a rate of 8.0%.

Journal Entries

January 1, 2003:

Long-lived asset (asset retirement cost)	\$ 194,879	
Asset retirement obligation liability		\$ 194,879
To record the initial fair value of the asset retirement obligation liability		

December 31, 2003:

Depreciation expense (asset retirement cost)	19,488	
Accumulated depreciation		19,488
To record straight-line depreciation on the asset retirement cost		
Accretion expense	16,565	
Asset retirement obligation liability		16,565
To record accretion expense on the asset retirement obligation liability		

December 31, 2004:

Depreciation expense (asset retirement cost)	19,488	
Accumulated depreciation		19,488
To record straight-line depreciation on the asset retirement cost		
Accretion expense	17,973	
Asset retirement obligation liability		17,973
To record accretion expense on the asset retirement obligation liability		
Long-lived asset (asset retirement cost)	19,704	
Asset retirement obligation liability		19,704
To record the change in estimated cash flows		

December 31, 2005–2012:

Depreciation expense (asset retirement cost)	21,951	
Accumulated depreciation		21,951
To record straight-line depreciation on the asset retirement cost adjusted for the change in cash flow estimate		
Accretion expense	Per schedule	
Asset retirement obligation liability		Per schedule
To record accretion expense on the asset retirement obligation liability		

December 31, 2012:

Asset retirement obligation liability	477,091	
Gain on settlement of asset retirement obligation liability		14,091
Accounts payable (outside contractor)		463,000
To record settlement of the asset retirement obligation liability		

>>> Case C: Recognition and Measurement Over More than One Reporting Period

55-42 This Case depicts an entity that places a nuclear utility plant into service on December 31, 2003. The entity is legally required to decommission the plant at the end of its useful life, which is estimated to be 20 years. Based on the requirements of this Subtopic, the entity recognizes a liability for an asset retirement obligation and capitalizes an amount for an asset retirement cost over the life of the plant as contamination occurs. The following schedule reflects the expected cash flows and respective credit-adjusted risk-free rates used to measure each portion of the liability through December 31, 2005, at which time the plant is 90 percent contaminated.

<u>Date</u>	<u>Expected Cash Flows</u>	<u>Credit-Adjusted Risk-Free Rate</u>
12/31/03	\$ 23,000	9.0%
12/31/04	1,150	8.5
12/31/05	1,900	9.2

55-43 On December 31, 2005, the entity increases by 10 percent its estimate of expected cash flows that were used to measure those portions of the liability recognized on December 31, 2003, and December 31, 2004, which results in an upward revision to the expected cash flows. Accordingly, the incremental expected cash flows of \$2,415 [\$2,300 (10 percent of \$23,000) plus \$115 (10 percent of \$1,150)] are discounted at the then-current credit-adjusted risk-free rate of 9.2 percent and recorded as a liability on December 31, 2005. The entity would account for the asset retirement obligation as follows.

	<u>Date Incurred</u>		
	<u>12/31/03</u>	<u>12/31/04</u>	<u>12/31/05</u>
Initial measurement of the asset retirement obligation liability:			
Expected cash flows adjusted for market risk	\$ 23,000	\$ 1,150	\$ 1,900
Credit-adjusted risk-free rate	9.00%	8.50%	9.20%
Discount period in years	20	19	18
Expected present value	\$ 4,104	\$ 244	\$ 390
Measurement of incremental expected cash flows occurring on December 31, 2005:			
Incremental expected cash flows (increase of 10 percent)			\$ 2,415
Credit-adjusted risk-free rate at December 31, 2005			9.20%
Discount period remaining in years			18
Expected present value			\$ 495

Carrying Amount of Liability Incurred in 2003

<u>Year</u>	<u>Liability Balance 1/1</u>	<u>Accretion (9.0%)</u>	<u>New Liability</u>	<u>Liability Balance 12/31</u>
2003			\$ 4,104	\$ 4,104
2004	\$ 4,104	\$ 369		4,473
2005	4,473	403		4,876

Carrying Amount of Liability Incurred in 2004

<u>Year</u>	<u>Liability Balance 1/1</u>	<u>Accretion (8.5%)</u>	<u>New Liability</u>	<u>Liability Balance 12/31</u>
2004			\$ 244	\$ 244
2005	\$ 244	\$ 21		265

**Carrying Amount of Liability Incurred in 2005
Plus Effect of Change in Expected Cash Flows**

<u>Year</u>	<u>Liability Balance 1/1</u>	<u>Accretion (9.2%)</u>	<u>Change in Estimate</u>	<u>New Liability</u>	<u>Liability Balance 12/31</u>
2005			\$ 495	\$ 390	\$ 885

Carrying Amount of Total Liability

<u>Year</u>	<u>Liability Balance 1/1</u>	<u>Accretion</u>	<u>Change in Estimate</u>	<u>New Liability</u>	<u>Total Carrying Amount 12/31</u>
2003				\$ 4,104	\$ 4,104
2004	\$ 4,104	\$ 369		244	4,717
2005	4,717	424	\$ 495	390	6,026

Journal Entries

December 31, 2003:

Long-lived asset (asset retirement cost)	\$4,104	
Asset retirement obligation liability		\$4,104
To record the initial fair value of the asset retirement obligation liability incurred this period		

December 31, 2004:

Depreciation expense ($\$4,104 \div 20$)	205	
Accumulated depreciation		205
To record straight-line depreciation on the asset retirement cost		
Accretion expense	369	
Asset retirement obligation liability		369
To record accretion expense on the asset retirement obligation liability		
Long-lived asset (asset retirement cost)	244	
Asset retirement obligation liability		244
To record the initial fair value of the asset retirement obligation liability incurred this period		

December 31, 2005:

Depreciation expense [$(\$4,104 \div 20) + (\$244 \div 19)$]	218	
Accumulated depreciation		218
To record straight-line depreciation on the asset retirement cost		
Accretion expense	424	
Asset retirement obligation liability		424
To record accretion expense on the asset retirement obligation liability		
Long-lived asset (asset retirement cost)	495	
Asset retirement obligation liability		495
To record the change in liability resulting from a revision in expected cash flow		
Long-lived asset (asset retirement cost)	390	
Asset retirement obligation liability		390
To record the initial fair value of the asset retirement obligation liability incurred this period		

>>> Case D: Conditional with Low Likelihood of Enforcement

55-44 This Case illustrates a timber lease in which the lessor has an option to require the lessee to settle an asset retirement obligation. Assume an entity enters into a five-year lease agreement that grants it the right to harvest timber on a tract of land and that agreement grants the lessor an option to require that the lessee reforest the underlying land at the end of the lease term. Based on past history, the lessee believes that the likelihood that the lessor will exercise that option is low. Rather, at the end of the lease, the lessor will likely accept the land without requiring reforestation. The lessee estimates that there is only a 10 percent probability that the lessor will elect to enforce reforestation. Paragraph 840-10-15-15 explains that Topic 840 does not apply to lease agreements concerning the rights to explore for or to exploit natural resources such as timber.

55-45 At the end of the first year, 20 percent of the timber has been harvested. The lessee estimates that the possible cash flows associated with performing reforestation activities in 4 years for the portion of the land that has been harvested will be \$300,000. When estimating the fair value of the asset retirement obligation liability to be recorded (using an expected present value technique), the lessee incorporates the probability that the restoration provisions will not be enforced.

<u>Possible Cash Flows</u>	<u>Probability Assessment</u>	<u>Expected Cash Flows</u>
\$ 300,000	10%	\$ 30,000
-	90	-
		<u>\$ 30,000</u>
Expected present value using credit-adjusted risk-free rate of 8.5 percent for 4 years		<u>\$ 21,647</u>

55-46 During the term of the lease, the lessee should reassess the likelihood that the lessor will require reforestation. For example, if the lessee subsequently determines that the likelihood of the lessor electing the reforestation option has increased, that change will result in a change in the expected cash flows and be accounted for as illustrated in Case B.

> > Example 3: Recognition of a Conditional Asset Retirement Obligation

55-47 This Example includes four Cases that illustrate when an entity would be required to recognize the fair value of an asset retirement obligation. The Cases do not provide specific guidance for determining when an entity has sufficient information to reasonably estimate the fair value of the asset retirement obligation. The determination as to when an entity has sufficient information to reasonably estimate the fair value of an asset retirement obligation should be based on the guidance in paragraphs 410-20-25-8 through 25-11. The Cases illustrate the initial recognition of a **conditional asset retirement obligation** based on the facts presented. Any differences in facts from those presented in the Cases may result in different conclusions.

55-48 The following Cases illustrate the guidance in paragraphs 410-20-25-7 through 25-11 and 410-20-30-1:

- An entity has sufficient information to reasonably estimate the fair value of an asset retirement obligation at the time the obligation is incurred (Cases A and B).
- An entity does not have sufficient information to reasonably estimate the fair value of an asset retirement obligation at the time the obligation is incurred (Case C).
- An entity initially does not have sufficient information and later has sufficient information to reasonably estimate the fair value of an asset retirement obligation (Case D).

> > > Case A: Recognition when Fair Value Can Be Reasonably Estimated

55-49 Assume a telecommunications entity owns and operates a communication network that uses wood poles that are treated with certain chemicals. There is no legal requirement to remove the poles from the ground. However, the owner may replace the poles periodically for a number of operational reasons. Once the poles are removed from the ground, they may be disposed of, sold, or reused as part of other activities. There is existing legislation that requires special disposal procedures for the poles in the particular state in which the entity operates.

55-50 At the date of purchase of the treated poles, the entity has the information to estimate a range of potential settlement dates, the potential methods of settlement, and the probabilities associated with the potential settlement dates and methods based on established industry practice. Therefore, at the date of purchase, the entity is able to estimate the fair value of the liability for the required disposal procedures using an expected present value technique.

55-51 Although the timing of the performance of the asset retirement activity is conditional on removing the poles from the ground and disposing of them, existing legislation creates a duty or responsibility for the entity to dispose of the poles in accordance with special procedures, and the obligating event occurs when the entity purchases the treated poles. Although the entity may decide not to remove the poles from the ground or may decide to reuse the poles and thereby defer settlement of the obligation, the ability to defer settlement does not relieve the entity of the obligation. The poles will eventually need to be disposed of using special procedures, because the poles will not last forever. Additionally, the ability of the entity to sell the poles prior to disposal does not relieve the entity of its present duty or responsibility to settle the obligation. The sale of the poles transfers the obligation to another entity. The assumption of the obligation by the buyer affects the exchange price. The bargaining of the exchange price reflects the buyer's and seller's individual estimates of the timing and (or) amount of the cost to extinguish the obligation.

55-52 The asset retirement obligation should be recognized when the entity purchases the poles because the entity has sufficient information to estimate the fair value of the asset retirement obligation. Because the legal requirement relates only to the disposal of the treated poles, the cost to remove the poles is not included in the asset retirement obligation. However, if there was a legal requirement to remove the treated poles, the cost of removal would be included.

> > > Case B: Recognition when Fair Value Can Be Reasonably Estimated

55-53 Assume an entity recently purchased several kilns lined with a special type of brick. As of the date of purchase, the kilns had not yet been used in any smelting processes. The kilns have a long useful life, but the bricks are replaced periodically. Because the bricks become contaminated with hazardous chemicals while the kiln is operated, a state law requires that when the bricks are removed, they must be disposed of at a special hazardous waste site. The entity has the information to estimate a range of potential settlement dates, the method of settlement, and the probabilities associated with the potential settlement dates based on its past practice of replacing the bricks to maintain the efficient operation of the kiln.

55-54 Therefore, at the date the bricks become contaminated because of the operation of the kiln, the entity is able to estimate the fair value of the liability for the required disposal procedures using an expected present value technique.

55-55 Although performance of the asset retirement activity is conditional on removing the bricks from the kiln, existing legislation creates a duty or responsibility for the entity to dispose of the bricks at a special hazardous waste site, and the obligating event occurs when the entity contaminates the bricks. As of the purchase date, the kilns have not yet been used in any smelting processes, and the bricks have not yet been contaminated. Therefore, at the date of purchase, no obligation exists because the bricks have not been contaminated and could be disposed of without performing any special disposal activities.

55-56 The fair value of the asset retirement obligation should be recognized once the kilns have been placed into operation and the bricks are contaminated. Although the entity may decide not to remove the bricks from the kiln and thereby defer settlement of the obligation, the ability to defer settlement does not relieve the entity of the obligation. The contaminated bricks will eventually need to be removed and disposed of at a special hazardous waste site, because a kiln will not last forever. Therefore, the obligation to perform the asset retirement activity is unconditional even though uncertainty exists about the timing of settlement. An asset retirement obligation should be recognized once the kilns have been placed into operation and the bricks are contaminated because the entity has sufficient information to estimate the fair value of the asset retirement obligation. The asset retirement obligation is the requirement to dispose of the contaminated bricks at a special hazardous waste site. The cost to remove the bricks is not part of the obligation and should be accounted for as a maintenance or replacement activity.

> > Case C: Recognition when Entity Has Insufficient Information to Reasonably Estimate Present Value

55-57 Assume an entity acquires a factory that contains asbestos. After the acquisition date, regulations are put in place that require the entity to handle and dispose of this type of asbestos in a special manner if the factory undergoes major renovations or is demolished. Otherwise, the entity is not required to remove the asbestos from the factory. The entity has several options to retire the factory in the future including demolishing, selling, or abandoning it. The entity believes it does not have sufficient information to estimate the fair value of the asset retirement obligation because the settlement date or the range of potential settlement dates has not been specified by others and information is not available to apply an expected present value technique. For example, there are no plans or expectation of plans to undertake a major renovation that would require removal of the asbestos or demolition of the factory. The factory is expected to be maintained by repairs and maintenance activities that would not involve the removal of the asbestos. Also, the need for major renovations caused by technology changes, operational changes, or other factors has not been identified.

55-58 Although the timing of the performance of the asset retirement activity is conditional on the factory undergoing major renovations or being demolished, existing regulations create a duty or responsibility for the entity to remove and dispose of asbestos in a special manner, and the obligating event occurs when the regulations are put in place. Therefore, an asset retirement obligation should be recognized when regulations are put in place if the entity can reasonably estimate the fair value of the liability. In this Case, the entity believes that there is an indeterminate settlement date for the asset retirement obligation because the range of time over which the entity may settle the obligation is unknown or cannot be estimated. Therefore, the entity cannot reasonably estimate the fair value of the liability. Accordingly, the entity would not recognize a liability for the asset retirement obligation when regulations are put in place, but it should disclose a description of the obligation, the fact that a liability has not been recognized because the fair value cannot be reasonably estimated, and the reasons why fair value cannot be reasonably estimated. The entity would recognize a liability in the period in which sufficient information is available to reasonably estimate its fair value.

> > Case D: Recognition when Entity Initially Has Insufficient Information, but Later Has Sufficient Information to Reasonably Estimate Present Value

55-59 Assume an entity acquires a factory that contains asbestos. At the acquisition date, regulations are in place that require the entity to handle and dispose of this type of asbestos in a special manner if the factory undergoes major renovations or is demolished. Otherwise, the entity is not required to remove the asbestos from the factory. The entity has several options to retire the factory in the future including demolishing, selling, or abandoning it. At the acquisition date, it is not evident that the fair value of the obligation is embodied in the acquisition price of the factory because both the seller and the buyer of the factory believed the obligation had an indeterminate settlement date, an active market does not exist for the transfer of the obligation, and sufficient information does not exist to apply an expected present value technique. Ten years after the acquisition date, the entity obtains additional information based on changes in demand for the products manufactured at that factory. At that time, the entity has the information to estimate a range of potential settlement dates, the potential methods of settlement, and the probabilities

associated with the potential settlement dates and potential methods of settlement. Therefore, at that time the entity is able to estimate the fair value of the liability for the special handling of the asbestos using an expected present value technique.

55-60 Although timing of the performance of the asset retirement activity is conditional on the factory undergoing major renovations or being demolished, existing regulations create a duty or responsibility for the entity to remove and dispose of asbestos in a special manner, and the obligating event occurs when the entity acquires the factory. In this Case, regulations are in place at the date of acquisition that require the entity to handle and dispose of the asbestos in a special manner. Therefore, the obligating event is the acquisition of the factory. If regulations were enacted after the date of acquisition, the obligating event would be the enactment of the regulations (see Case C).

55-61 Although the entity may decide to abandon the factory and thereby defer settlement of the obligation for the foreseeable future, the ability to defer settlement does not relieve the entity of the obligation. The asbestos will eventually need to be removed and disposed of in a special manner, because no building will last forever. Additionally, the ability of the entity to sell the factory does not relieve the entity of its present duty or responsibility to settle the obligation. The sale of the asset would transfer the obligation to another entity and that transfer would affect the selling price. Therefore, the obligation to perform the asset retirement activity is unconditional even though uncertainty exists about the timing and method of settlement.

55-62 In this Case, an asset retirement obligation is not recognized when the entity acquires the factory because the entity does not have sufficient information to estimate the fair value of the obligation. The entity would disclose a description of the obligation, the fact that a liability has not been recognized because the fair value cannot be reasonably estimated, and the reasons why fair value cannot be reasonably estimated. An asset retirement obligation would be recognized by this entity 10 years after the acquisition date because that is when the entity has sufficient information to estimate the fair value of the asset retirement obligation.

>> Example 4: Historical Waste on Electrical and Electronic Equipment Associated with EU Directive 2002/96/EC

55-63 This Example illustrates the guidance in paragraphs [410-20-55-23 through 55-29](#).

55-64 Assume an entity (a commercial user) is currently using electronic equipment that must be disposed of in accordance with the requirements of EU Directive 2002/96/EC. The EU-member country has not yet adopted the legislation. The entity has the ability either to replace the equipment or to dispose of the equipment without replacing it. In the EU-member country in which the entity operates, the producer of the replacement equipment will be wholly responsible for disposal costs if and when the equipment is replaced. The recycling of electronic waste equipment is not a revenue-generating business activity of the producer.

55-65 Upon the adoption of the legislation, the entity should recognize a liability for the fair value of the asset retirement obligation. Upon initial recognition of a liability, the entity should capitalize an asset retirement cost by increasing the carrying amount of the related asset by the same amount as the liability. The accounting subsequent to the initial recognition of the asset and liability should be consistent with the guidance in paragraphs [410-20-35-3 through 35-6](#).

55-66 The waste management obligation remains with the commercial user until the historical waste equipment is replaced or is disposed of by the commercial user itself. Assuming the equipment is replaced, the entity should determine the portion of the purchase price that relates to the cost of the replacement asset and the portion that relates to the assumption of the obligation by the producer. That determination should be based on the fair value of the obligation, without the sale of the new asset. The entity should recognize a gain or loss based on the difference between the carrying amount of the liability at the date of the sale and the portion of the sales price that relates to the obligation. The producer should recognize revenue for the total amount received, reduced by the fair value of the obligation, and recognize a liability for the fair value of the obligation upon transfer of the obligation from the commercial user. Assuming the equipment is disposed of by the entity rather than replaced, the entity should recognize a gain or loss based on the difference between the carrying amount of the liability at the date of the disposal and the actual cost of disposal. See paragraphs [820-10-55-77 through 55-81](#) for an illustration of an entity required to estimate the fair value of an asset retirement obligation.

55-67 For the financing of historical waste, the Directive also distinguishes between historical waste from private households and historical waste from "users other than private households" (referred to as "commercial users").

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> Interest

60-1 For guidance related to capitalization of interest cost, see Subtopic [835-20](#).

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General

Subsection revised 01-Oct-2012

Combine Subsections

00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
410-30-25-4	Amended	Accounting Standards Update No. 2012-04	10/01/2012
410-30-35-10	Amended	Accounting Standards Update No. 2012-04	10/01/2012

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General

Subsection revised 01-Jul-2009

Combine Subsections

05-1 This Subtopic provides guidance on accounting for environmental remediation liabilities and is written in the context of operations taking place in the United States; however, the accounting guidance is applicable to all the operations of the reporting entity.

05-2 The objective of this Overview and Background Section is to provide an overview of important environmental laws and regulations. It is intended to be nonauthoritative. The summary of legal matters contained in this Section represents an understanding of the legal requirements and practices at the time that these environmental laws were initially enacted. Any references to the various laws, rules, regulations established by others shall not be considered definitive interpretations of such laws, rules, and regulations for any purpose. Laws, rules and regulations may change over time and the standard Financial Accounting Standards Board (FASB) process will not update the Codification for such changes. The FASB assumes no responsibility for the accuracy of the legal guidance included here. Therefore, users must evaluate the current laws, rules, and regulations.

05-3 Although this Section focuses on both state and federal U. S. laws and regulations, environmental considerations are also important for foreign operations. Environmental laws and regulations in many countries are similar to U. S. laws. The legal and regulatory climates in other countries are evolving. Regardless of whether the host countries' environmental laws are as stringent as those in the United States, entities can often be held liable for environmental damages under a variety of nonenvironmental statutes and broad legal theories.

05-4 This Section is organized as follows:

- a. Environmental remediation liability laws
- b. Laws intended to control or prevent pollution
- c. Other federal statutes
- d. Potentially responsible parties
- e. Strict liability
- f. Joint and several liability
- g. Mitigation of strict, joint and several, and retroactive liability
- h. Costs associated with remediation
- i. Environmental loss contingencies.

> Environmental Remediation Liability Laws

05-5 The first kind of environmental law, environmental remediation liability laws, includes individual statutes as well as response provisions in other statutes. The most important of these are the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and the Reauthorization Act of 1986, which together are referred to as Superfund, and the **corrective action** provisions of the Resource Conservation and Recovery Act of 1976. Under Superfund's current broad liability provisions, the U.S. Environmental Protection Agency may order liable parties to remediate sites or use Superfund money to remediate them and then seek to recover its costs and additional damages. Similarly, under the corrective action provisions of the Resource Conservation and Recovery Act of 1976, the Environmental Protection Agency may order "facilities that treat, store, or dispose of hazardous waste" to clean up releases of **hazardous waste constituents** associated with past or ongoing practices.

05-6 Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 in 1980 to facilitate the remediation of abandoned waste sites. The Comprehensive Environmental Response, Compensation, and Liability Act established a program to identify sites where hazardous substances have been or might be released into the environment; to ensure that they are remediated by responsible parties or the government; to compensate the United States, states, municipalities, and tribes for damages to **natural resources**; and to create a procedure for claims against responsible parties by parties who have cleaned up sites or spent money to restore natural resources.

05-7 The Resource Conservation and Recovery Act provides comprehensive federal regulation of **hazardous wastes** from point of generation to final **disposal**. All generators of hazardous waste, transporters of hazardous waste, and owners and operators of hazardous waste treatment, storage, or disposal facilities must comply with the applicable requirements of the statute. Many states have also enacted laws that are similar to the federal statutes. Furthermore, under certain federal statutes, such as the Resource Conservation and Recovery Act of 1976, states are allowed to promulgate regulations to implement federal programs as long as the state law is at least as stringent as the federal law. In most such cases, states are free to enact more stringent provisions.

> Laws Intended to Control or Prevent Pollution

05-8 Environmental laws of the second kind are intended to control or prevent pollution and are directed at identifying or regulating pollution sources or reducing emissions or discharges of pollutants. There are many statutes that regulate sources of pollution, including the pollution control provisions of the Resource Conservation and Recovery Act of 1976 (solid and hazardous wastes), the Clean Water Act (discharge of pollutants into the waters of the United States and to publicly owned treatment works), and the Clean Air Act (emission of pollutants into the atmosphere). Other examples are the Emergency Planning and Community Right-to-Know Act and the Pollution Prevention Act of 1990.

05-9 The pollution control provisions in Chapter 3 of the Resource Conservation and Recovery Act of 1976 provide for cradle-to-grave management standards for hazardous wastes. Section 7003 of the Resource Conservation and Recovery Act of 1976 also authorizes the Environmental Protection Agency to conduct **removal actions**, seek affirmative injunctive relief, and maintain cost-recovery actions where an imminent and substantial endangerment to the public health or welfare or to the environment is determined to exist. Much like under Superfund, one who has contributed to the disposal of waste that is causing an imminent and substantial endangerment can be required to perform or pay for associated remediation under section 7003. The Resource Conservation and Recovery Act of 1976 also requires the Environmental Protection Agency to regulate underground storage tanks. Most states have enacted their own underground storage tank regulations as well.

05-10 The Clean Air Act provides comprehensive federal regulation of all sources of air pollution. Amendments to the Clean Air Act in the 1990s are designed to address issues such as acid rain, urban air pollution, toxic air pollutants, and ozone-depleting chemicals. The major provisions of the Clean Air Act amendments require emissions reduction in the electric utility industry, operating permits for existing facilities, an expansion of the air toxics program to regulate a large number of toxic air pollutants, and new source categories (including smaller sources, such as dry cleaners).

05-11 The Clean Water Act provides comprehensive federal regulation of all sources of water pollution. The act authorizes cleanup, injunctive, and cost-recovery actions where an imminent hazard is caused by pollution. It also prohibits the discharge of oil and other hazardous substances to the navigable waters of the United States, imposes a criminal penalty for failure to notify the appropriate entity of such discharges, and provides for citizen suits. Most states have assumed enforcement of the Act within their borders through state regulations that correspond to the federal regulations related to the control or prevention of pollution of water.

> Other Federal Statutes

05-12 There are a variety of other statutes that relate to environmental matters. Two of the more significant statutes are the Emergency Planning and Community Right-to-Know Act and the Toxic Substances Control Act.

05-13 The Emergency Planning and Community Right-to-Know Act requires facilities that have certain quantities of extremely hazardous substances to notify their state emergency response commission that they are subject to the emergency planning requirements of the Superfund Amendments and Reauthorization Act of 1986. They must also report releases to the local emergency planning committee. In addition, facilities that store chemicals over specified threshold amounts must submit material safety data sheets, or their equivalent, to the appropriate local emergency planning committee, the state emergency response commission, and the fire department with jurisdiction over the facility.

05-14 The Toxic Substances Control Act regulates the manufacture, processing, and distribution in commerce of chemical substances and mixtures capable of adversely affecting health or the environment. The Toxic Substances Control Act may require testing and may impose use restrictions, along with requirements for the reporting and retention of information on the risks of Toxic Substances Control Act-regulated substances. Regulations promulgated under the Toxic Substances Control Act also govern the manufacturing, processing, and distribution in commerce of polychlorinated biphenyls and asbestos.

> Potentially Responsible Parties

05-15 Superfund places liability on the following four distinct classes of responsible parties:

- a. Current owners or operators of sites at which hazardous substances have been disposed of or abandoned
- b. Previous owners or operators of sites at the time of disposal of hazardous substances
- c. Parties that "arranged for disposal" of hazardous substances found at the sites
- d. Parties that transported hazardous substances to a site, having selected the site for treatment or disposal.

05-16 This liability is imposed regardless of whether a party was negligent, whether the site was in compliance with environmental laws at the time of the disposal, or whether the party participated in or benefited from the deposit of the **hazardous substance**. Parties that disposed of hazardous substances many years ago—including the years preceding the enactment of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980—at sites where there is, was, or may be a **release** into the environment, may be liable for remediation costs.

> Strict Liability

05-17 The courts have interpreted the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 to impose **strict liability**. Thus, a waste generator that disposed of its waste at approved facilities, in accordance with all then-current requirements, having exercised "due care," would nevertheless be liable. Further, a waste generator that is responsible for a small percentage of the total amount of waste at a site may be held liable for the entire cost of remediating the site.

05-18 Also noteworthy is that wastes need not be hazardous wastes for there to be environmental remediation liability. If the waste generator "arranged for disposal" of wastes containing hazardous substances (at any concentration level and regardless of whether the substances were defined as, or known to be, hazardous at the time of disposal), and a "release" of hazardous substances has or could occur, the waste generator could be subject to environmental remediation liability.

05-19 Hazardous substance is a much broader term than hazardous waste. It includes any substance identified by the Environmental Protection Agency by regulation, pursuant to a number of federal statutes. Covered, for example, are substances considered to be toxic pollutants under the Clean Water Act or hazardous air pollutants under the Clean Air Act. The various lists of hazardous substances identified by the Environmental Protection Agency contain more than one thousand chemicals and chemical compounds.

05-20 The possibility of becoming subject to liability for environmental remediation costs associated with past waste disposal practices based on strict liability can affect transactions involving the acquisition or merger of an entity or the purchase of land.

> Joint and Several Liability

05-21 Through Environmental Protection Agency initiated legal action, liability under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 may be **joint and several**. If a potentially responsible party can prove, however, that the harm is divisible and there is a reasonable basis for apportionment of costs, the potentially responsible party may ultimately be responsible only for its portion of the costs.

05-22 In order to mitigate the potentially harsh effects of the strict, joint and several, and retroactive liability scheme, however, Superfund does permit responsible parties to sue other responsible parties to make them contribute to the cost of the remediation or to recover money spent

on remediation.

> Costs Associated with Remediation

05-23 Costs to a potentially responsible party may include cleanup costs (containment, removal, remedial action), enforcement costs (for example, legal), government oversight costs, and natural resource damages. Though the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 does not provide for personal injury or property damage suits, suits for injury to health or property (referred to as toxic torts) may also be brought by third parties under various legal theories. There is a growing specter of liability for natural resource damages under the Superfund laws. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 authorizes the recovery of damages for injury to, destruction of, or loss of natural resources, including reasonable costs for assessing such injury resulting from a release of a hazardous substance. Natural resource damage claims include actual restoration costs and lost use values and may in the future include nonuse values, such as the intrinsic public value of protecting or restoring resources that may not be used but are valuable for their mere existence.

05-24 Additional costs can include a remedial investigation and a feasibility study that together generally take a minimum of two years to complete and, depending on factors such as the types of hazardous substances, soil formations, and number of parties involved, may take more than five years. The Environmental Protection Agency oversees the progress of the remedial investigation and feasibility study, and completion is sometimes performed in stages. After Superfund site remedial action is completed, activities must be conducted at the site to ensure that the remedy is effective and operating properly. For example, after a system to pump and treat groundwater is constructed (remedial action), the system must be operated and maintained. In addition, the Environmental Protection Agency may require postremediation monitoring. These operation and maintenance activities may continue for 30 years or longer.

> Environmental Loss Contingencies

05-25 Although environmental remediation liabilities is not one of the examples discussed in paragraph 450-20-05-10, environmental remediation liabilities are loss contingencies, and the discussion in paragraphs 450-20-55-10 through 55-17 can be useful in understanding the requirements of Subtopic 450-20 as they relate to environmental remediation liabilities.

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General

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10-1 This Subtopic requires that an entity recognize a liability for obligations associated with environmental remediation liabilities that relate to pollution arising from some past act, generally as a result of the provisions of Superfund, the corrective-action provisions of the Resource Conservation and Recovery Act, or analogous state and non-U.S. laws and regulations.

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410-30-15 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > 15 Scope and Scope Exceptions

General

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> Entities

15-1 The provisions of this Subtopic apply to all entities. This Subtopic provides guidance on accounting for environmental remediation liabilities and is written in the context of operations taking place in the United States; however, the accounting guidance is applicable to all the

operations of the reporting entity.

15-2 The recognition and measurement guidance in this Subtopic should be applied on a site-by-site basis.

> Transactions

15-3 The guidance in this Subtopic does not apply to the following transactions and activities:

- a. Environmental contamination incurred in the normal operation of a long-lived asset (see Subtopic 410-20 for guidance that will apply if the entity is legally obligated to treat the contamination). Paragraph 410-20-15-3(b) explains that the obligation to clean up the spillage resulting from the normal operation of the fuel storage facility is within the scope of Subtopic 410-20. Additionally, that Subtopic applies if a **legal obligation** to treat environmental contamination is incurred or assumed as a result of the acquisition, construction, or development of a long-lived asset.
- b. Pollution control costs with respect to current operations or on accounting for costs of future site restoration or **closure** that are required upon the cessation of operations or sale of facilities, as such current and future costs and obligations represent a class of accounting issues different from environmental remediation liabilities.
- c. Environmental remediation actions that are undertaken at the sole discretion of management and that are not induced by the threat, by governments or other parties, of litigation or of assertion of a claim or an assessment.
- d. Recognizing liabilities of insurance entities for unpaid claims.
- e. Natural resource damages and toxic torts (see paragraphs 450-20-55-10 through 55-21).
- f. Asset impairment issues.

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Legal Obligation

An obligation that a party is required to settle as a result of an existing or enacted law, statute, ordinance, or written or oral contract or by legal construction of a contract under the doctrine of promissory estoppel.

Retirement

The other-than-temporary removal of a long-lived asset from service. That term encompasses sale, abandonment, recycling, or disposal in some other manner. However, it does not encompass the temporary idling of a long-lived asset. After an entity retires an asset, that asset is no longer under the control of that entity, no longer in existence, or no longer capable of being used in the manner for which the asset was originally acquired, constructed, or developed.

Closure

Related to the Resource Conservation and Recovery Act of 1976: the process in which the owner-operator of a hazardous waste management unit discontinues active operation of the unit by treating, removing from the site, or disposing of on site all hazardous wastes in accordance with an Environmental Protection Agency or state-approved plan. Included, for example, are the process of emptying, cleaning, and removing or filling underground storage tanks and the capping of a landfill. Closure entails specific financial guarantees and technical tasks that are included in a closure plan and must be implemented.

Consent Decree

A legal document, approved by a judge, that formalizes an agreement reached between the Environmental Protection Agency and potentially responsible parties through which potentially responsible parties will conduct all or part of a remedial action at a Superfund site; cease or correct actions or processes that are polluting the environment; or otherwise comply with regulations where potentially responsible parties' failure to comply caused the Environmental Protection Agency to initiate regulatory enforcement actions. The consent decree describes the actions potentially responsible parties will take and may be subject to a public comment period.

Corrective Action

Related to the Resource Conservation and Recovery Act of 1976: action to remedy releases from hazardous waste management units, or any other sources of releases at or from a treatment, storage, or disposal facility.

Disposal

Related to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the Resource Conservation and Recovery Act of 1976: under the Resource Conservation and Recovery Act of 1976, the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. Similarly under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 with regard to hazardous substances.

Hazardous Substance

Related to Superfund: the definition of hazardous substance in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is broader than the definition of hazardous wastes under the Resource Conservation and Recovery Act of 1976. Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, a hazardous substance is any element, compound, mixture, solution, or substance that, when released to the environment, may present substantial danger to the public health or welfare or to the environment. It also includes the following:

- a. Specifically designated substances
- b. Toxic pollutants under the Federal Water Pollution Control Act
- c. Hazardous wastes having the characteristics identified under or listed pursuant to the Resource Conservation and Recovery Act of 1976 (excluding any waste suspended from regulation under the Solid Waste Disposal Act by Congress)
- d. Hazardous air pollutants under the Clean Air Act
- e. Any imminently hazardous chemical substance or mixture for which the government has taken action under section 7 of the Toxic Substances Control Act.

Petroleum (including crude oil not otherwise specifically listed or designated as a hazardous substance under any of those laws), natural gas, natural gas liquids, liquefied natural gas, or synthetic gas useable for fuel (or mixtures of natural gas and such synthetic gas) are excluded.

Hazardous Waste

Related to Resource Conservation and Recovery Act of 1976: a waste, or combination of wastes, that because of its quantity, concentration, toxicity, corrosiveness, mutagenicity or inflammability, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Technically, those wastes that are regulated under the Resource Conservation and Recovery Act of 1976 40 CFR Part 261 are considered to be hazardous wastes.

Hazardous Waste Constituent

A constituent that caused the waste to be listed as a hazardous waste under the Resource Conservation and Recovery Act of 1976 40 CFR Part 261 Subpart D.

Joint and Several Liability

Where liability is joint and several, any party deemed liable is potentially responsible for all of the associated costs. This scheme of liability means that any responsible party can potentially be liable for the entire cost of remediating a site, notwithstanding that the party is responsible for only a small amount of the total hazardous substances or waste at the site and did nothing improper.

Natural Resources

Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, natural resources are defined as land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed or held in trust by, or otherwise controlled by the United States, state or local governments, foreign governments, or Indian tribes.

Orphan Share

Equitable share of liability for response or remediation costs attributed to orphan-share potentially responsible parties, or the amount by which the equitable share of liability for response or remediation costs attributable to other parties exceeds the amount for which those parties have settled their liability.

Release

Related to Superfund: any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment. Includes the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance, pollutant, or contaminant. The law provides for several exclusions. Release also means the substantial threat of release.

Remedial Action

Related to Superfund: generally long-term actions taken to do any of the following:

- a. Investigate, alleviate, or eliminate the effects of a release of a hazardous substance into the environment
- b. Investigate, alleviate, or eliminate a threat of the release of an existing hazardous substance that could potentially harm human health or the environment
- c. Restore natural resources.

Also refers to corrective action under the Resource Conservation and Recovery Act of 1976.

Remedial Investigation-Feasibility Study

Extensive technical studies conducted by the government or by the potentially responsible parties to investigate the scope of site impacts and determine the remedial alternatives that, consistent with the National Contingency Plan, may be implemented at a Superfund site.

Government-funded remedial investigation-feasibility studies do not recommend a specific alternative for implementation. Remedial investigation-feasibility studies conducted by potentially responsible parties usually do recommend and technically support a remedial alternative. A remedial investigation-feasibility study may include a variety of on- and off-site activities, such as monitoring, sampling, and analysis.

Removal Action

Under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, generally short-term actions taken to respond promptly to an urgent need. The cleanup or removal of released hazardous substances from the environment; actions in response to the threat of release; actions that may be necessary to monitor, assess, and evaluate the release or threat; disposal of removed material; or other actions needed to prevent, minimize, or mitigate damage to public health or welfare or to the environment. Removal also includes, without being limited to, security fencing or other measures to limit access; provision of alternative water supplies; temporary evacuation and housing of threatened individuals not otherwise provided for; and any emergency assistance provided under the Disaster Relief Act.

Strict Liability

Liability imposed without regard to the liable party's fault.

Unilateral Administrative Order

Order issued unilaterally by the Environmental Protection Agency under section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 to potentially responsible parties, or to nonpotentially responsible parties such as adjacent landowners, requiring them to take a response action. Unilateral administrative orders contain findings of fact and conclusions of law, and they specify the work to be performed and the Environmental Protection Agency's right to take over the work in the event of noncompliance, inadequate performance, or an emergency. A unilateral administrative order does not allocate conduct required by the order between individual potentially responsible parties; however, the Environmental Protection Agency may issue carve-out orders requiring individual potentially responsible parties to perform specific actions. Also referred to as a section 106 order.

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General

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> Overall Approach

25-1 Paragraph 450-20-25-2 requires the accrual of a liability if both of the following conditions are met:

- a. Information available before the financial statements are issued or are available to be issued (as discussed in Section 855-10-25) indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements.
- b. The amount of the loss can be reasonably estimated.

25-2 An entity's environmental remediation obligation that results in a liability generally does not become determinable as a distinct event, nor is the amount of the liability generally fixed and determinable at a specific point in time. Rather, the existence of a liability for environmental remediation costs becomes determinable and the amount of the liability becomes estimable over a continuum of events and activities that help to frame, define, and verify the liability. (See Subtopic [450-20](#).)

25-3 The underlying cause of an environmental remediation liability is the past or present ownership or operation of a site, or the contribution or transportation of waste to a site, at which **remedial actions** (at a minimum, investigation) must take place. For a liability to be recognized in the financial statements, this underlying cause must have occurred on or before the date of the financial statements.

> Probability That a Liability Has Been Incurred

25-4 In the context of environmental remediation liabilities, the probability criterion in paragraph [450-20-25-2](#) consists of two elements; the criterion is met if both of the following elements are met on or before the date the financial statements are issued or are available to be issued (as discussed in Section [855-10-25](#)):

- a. Litigation has commenced or a claim or an assessment has been asserted, or, based on available information, commencement of litigation or assertion of a claim or an assessment is probable. In other words, it has been asserted (or it is probable that it will be asserted) that the entity is responsible for participating in a remediation process because of a past event.
- b. Based on available information, it is probable that the outcome of such litigation, claim, or assessment will be unfavorable. In other words, an entity will be held responsible for participating in a remediation process because of the past event.

25-5 What constitutes commencement or probable commencement of litigation or assertion or probable assertion of a claim or an assessment in relation to particular environmental laws and regulations may require legal determination.

25-6 Given the legal framework within which most environmental remediation liabilities arise, there is a presumption that the outcome of such litigation, claim, or assessment will be unfavorable if both of the following conditions exist:

- a. Litigation has commenced or a claim or an assessment has been asserted, or commencement of litigation or assertion of a claim or assessment is probable.
- b. The reporting entity is associated with the site—that is, it in fact arranged for the **disposal** of hazardous substances found at a site or transported hazardous substances to the site or is the current or previous owner or operator of the site.

> Ability to Reasonably Estimate the Liability

25-7 Estimating environmental remediation liabilities involves an array of issues at any point in time. In the early stages of the process, cost estimates can be difficult to derive because of uncertainties about a variety of factors. For this reason, estimates developed in the early stages of remediation can vary significantly; in many cases, early estimates later require significant revision. The following are some of the factors that are integral to developing cost estimates:

- a. The extent and types of hazardous substances at a site
- b. The range of technologies that can be used for remediation
- c. Evolving standards of what constitutes acceptable remediation
- d. The number and financial condition of other potentially responsible parties and the extent of their responsibility for the remediation (that is, the extent and types of hazardous substances they contributed to the site).

25-8 Section [450-20-55](#) concludes that the criterion for recognition of a loss contingency in paragraph [450-20-25-2\(b\)](#) is met when a range of loss can be reasonably estimated.

25-9 An estimate of the range of an environmental remediation liability typically is derived by combining estimates of various components of the liability (such as the costs of performing particular tasks, or amounts allocable to other potentially responsible parties but that will not be paid by those other potentially responsible parties), which are themselves likely to be ranges. For some of those component ranges, there may be amounts that appear to be better estimates than any other amount within the range; for other component ranges, there may be no such best estimates. Accordingly, the overall liability that is recorded may be based on amounts representing the lower end of a range of costs for some components of the liability and best estimates within ranges of costs of other components of the liability.

25-10 At the early stages of the remediation process, particular components of the overall liability may not be reasonably estimable. This fact should not preclude the recognition of a liability. Rather, the components of the liability that can be reasonably estimated should be viewed as a surrogate for the minimum in the range of the overall liability.

25-11 For example, a sole potentially responsible party that has confirmed that it sent waste to a Superfund site and agrees to perform a remedial investigation and feasibility study may know that it will incur costs related to the **remedial investigation-feasibility study**. The potentially responsible party, although aware that the total costs associated with the site will be greater than the cost of the remedial investigation-feasibility study, may be unable to reasonably estimate the overall liability because of existing uncertainties, for example, regarding the kinds and quantities of hazardous substances present at the site and the technologies available to remediate the site. This lack of ability to quantify the total costs of the remediation effort, however, shall not preclude recognition of the estimated cost of the remedial investigation-feasibility study. In this circumstance, a liability for the best estimate (or, if no best estimate is available, the minimum amount in the range) of the cost of the remedial investigation-feasibility study and for any other component remediation costs that can be reasonably

estimated shall be recognized in the entity's financial statements.

25-12 Uncertainties relating to the entity's share of an environmental remediation liability shall not preclude the entity from recognizing its best estimate of its share of the liability or, if no best estimate can be made, the minimum estimate of its share of the liability, if the liability is probable and the total remediation liability associated with the site is reasonably estimable within a range (see paragraphs 410-30-30-1 through 30-7).

25-13 Uncertainties are pervasive in the measurement of environmental remediation liabilities, and reporting entities are required to recognize their best estimate at the particular point in time (or, if no best estimate can be made, the minimum estimate) of their share of the liability and to refine their estimate as events in the remediation process occur.

> Benchmarks

25-14 Certain stages of a remediation effort or process and of potentially responsible party involvement (see paragraphs 410-30-05-24 for a discussion of these stages) provide benchmarks that should be considered when evaluating the probability that a loss has been incurred and the extent to which any loss is reasonably estimable. Benchmarks should not, however, be applied in a manner that would delay recognition beyond the point at which the recognition criteria in Subtopic 450-20 are met.

25-15 The following are recognition benchmarks for a Superfund remediation liability; analogous stages of the Resource Conservation and Recovery Act corrective-action process are also indicated. At a minimum, the estimate of a Superfund (or Resource Conservation and Recovery Act) remediation liability should be evaluated as each of these benchmarks occurs.

a. Identification and verification of an entity as a potentially responsible party. The Resource Conservation and Recovery Act analogue is subsection to facility permit requirements. Receipt of notification or otherwise becoming aware that an entity may be a potentially responsible party compels the entity to action. The entity must examine its records to determine whether it is associated with the site. If, based on a review and evaluation of its records and all other available information, the entity determines that it is associated with the site, it is probable that a liability has been incurred. If all or a portion of the liability is reasonably estimable, the liability shall be recognized. In some cases, an entity will be able to reasonably estimate a range of its liability very early in the process because the site situation is common or similar to situations at other sites with which the entity has been associated (for example, the remediation involves only the removal of underground storage tanks in accordance with the underground storage tank program). In such cases, the criteria for recognition would be met and the liability shall be recognized. In other cases, however, the entity may have insufficient information to reasonably estimate the minimum amount in the range of its liability. In these cases, the criteria for recognition would not be met at this time.

b. Receipt of **unilateral administrative order**. The Resource Conservation and Recovery Act analogue is, generally, interim corrective measures. An entity may receive a unilateral administrative order compelling it to take a response action at a site or risk penalties of up to four times the cost of the response action. Such response actions may be relatively limited actions, such as the performance of a remedial investigation and feasibility study or performance of a **removal action**, or they may be broad actions such as remediating a site. Under section 106 of Superfund, the Environmental Protection Agency must find that an "imminent and substantial endangerment" exists at the site before such an order may be issued. No pre-enforcement review by a court is authorized under Superfund if an entity elects to challenge a unilateral administrative order. The ability to estimate costs resulting from unilateral administrative orders varies with factors such as site complexity and the nature and extent of the work to be performed. The benchmarks that follow should be considered in evaluating the ability to estimate such costs insofar as the actions required by the unilateral administrative order involve these benchmarks. The cost of performing the requisite work generally is estimable within a range, and recognition of an environmental remediation liability for costs of removal actions generally should not be delayed beyond this point.

c. Participation, as a potentially responsible party, in the remedial investigation-feasibility study. The Resource Conservation and Recovery Act analogue is Resource Conservation and Recovery Act facility investigation. At this stage, the entity and possibly others have been identified as potentially responsible parties and have agreed to pay the costs of a study that will investigate the extent of the environmental impact of the **release** or threatened release of hazardous substances and identify site-remediation alternatives. Further, the total cost of the remedial investigation-feasibility study generally is estimable within a reasonable range. In addition, the identification of other potentially responsible parties and their agreement to participate in funding the remedial investigation-feasibility study typically provides a reasonable basis for determining the entity's allocable share of the cost of the remedial investigation-feasibility study. At this stage, additional information may be available regarding the extent of environmental impact and possible remediation alternatives. This additional information, however, may or may not be sufficient to provide a basis for reasonable estimation of the total remediation liability. At a minimum, the entity should recognize its share of the estimated total cost of the remedial investigation-feasibility study. As the remedial investigation-feasibility study proceeds, the entity's estimate of its share of the total cost of the remedial investigation-feasibility study can be refined. Further, additional information may become available based on which the entity can refine its estimates of other components of the liability or begin to estimate other components. For example, an entity may be able to estimate the extent of environmental impact at a site and to identify existing alternative remediation technologies. An entity may also be able to identify better the extent of its involvement at the site relative to other potentially responsible parties; the universe of potentially responsible parties may be identified; negotiations among potentially responsible parties and with federal and state Environmental Protection Agency representatives may occur; and information may be obtained that materially affects the agreed-upon method of remediation.

d. Completion of feasibility study. The Resource Conservation and Recovery Act analogue is corrective measures study. At substantial completion of the feasibility study, both a minimum remediation liability and the entity's allocated share generally will be reasonably estimable. The feasibility study should be considered substantially complete no later than the point at which the potentially responsible parties recommend a proposed course of action to the Environmental Protection Agency. If the entity had not

previously concluded that it could reasonably estimate the remediation liability (the best estimate or, if no amount within an estimated range of loss was a better estimate than any other amount in the range, the minimum amount in the range), recognition should not be delayed beyond this point, even if uncertainties, for example, about allocations to individual potentially responsible parties and potential recoveries from third parties, remain.

e. Issuance of record of decision. The Resource Conservation and Recovery Act analogue is approval of corrective measures study. At this point, the Environmental Protection Agency has issued its determination specifying a preferred remedy. Normally, the entity and other potentially responsible parties have begun, or perhaps completed, negotiations, litigation (see paragraphs 410-30-35-8 through 35-11), or both for their allocated share of the remediation liability. Accordingly, the entity's estimate normally can be refined based on the specified preferred remedy and a preliminary allocation of the total remediation costs.

f. Remedial design through operation and maintenance, including postremediation monitoring. The Resource Conservation and Recovery Act analogue is corrective measures implementation. During the design phase of the remediation, engineers develop a better sense of the work to be done and are able to provide more precise estimates of the total remediation cost. Further information likely will become available at various points until the site is delisted, subject only to postremediation monitoring. The entity should continue to refine and recognize its best estimate of its final obligation as this additional information becomes available.

> Criteria to Capitalize Environmental Treatment Costs

25-16 In general, environmental contamination treatment costs shall be charged to expense.

25-17 In certain situations, such as those described in paragraphs 410-30-25-18 through 25-21), it may be appropriate to capitalize environmental remediation costs.

25-18 Those costs may be capitalized if recoverable but only if any one of the following criteria is met:

- a. The costs extend the life, increase the capacity, or improve the safety or efficiency of property owned by the entity. For purposes of this criterion, the condition of that property after the costs are incurred must be improved as compared with the condition of that property when originally constructed or acquired, if later.
- b. The costs mitigate or prevent environmental contamination that has yet to occur and that otherwise may result from future operations or activities. In addition, the costs improve the property compared with its condition when constructed or acquired, if later.
- c. The costs are incurred in preparing for sale that property currently held for sale.

25-19 This Subtopic requires that tangible assets acquired to clean a particular spill not be charged to expense immediately. Rather, to the extent that those tangible assets have future uses, they may be capitalized. Example 5 (see paragraph 410-30-55-18) illustrates this guidance.

25-20 Paragraph Not Used

> Remediation Liabilities in Property Acquisitions

25-21 The recording of the receipt of property as a contribution received following the guidance in Subtopic 958-605 shall include the effect of any environmental remediation liability that is recorded in conjunction with the contribution.

25-22 Recording an environmental remediation liability usually results in a corresponding charge to income, and the guidance herein with respect to the income statement refers to such charges.

> Unasserted Claims

25-23 Future actions of an entity, when they occur, may create a **legal obligation** to perform environmental remediation; however, no obligation exists currently (for example, if the obligation arises only when and if an entity ceases to operate a facility). Costs related to asset **retirement**, including costs of future site restoration or **closure** that are required upon the cessation of operations or sale of facilities, may create a current obligation that would be recognized in accordance with Subtopic 410-20.

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General

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[Combine Subsections](#)

> Allocation of Liability Among Potentially Responsible Parties

30-1 At the early stages of the remediation process, environmental remediation liabilities are not easily quantified, due in part to their uncertainties. As a practical matter, the range of an estimated remediation liability will be defined and refined as events in the remediation process occur. The environmental remediation liability recorded by an entity should be based on that entity's estimate of its allocable share of the joint and several remediation liability. The estimation of an entity's allocable share of the joint and several remediation liability (see paragraph 410-30-55-4) for a site requires an entity to do all of the following:

- a. Identify the potentially responsible parties for the site
- b. Assess the likelihood that other potentially responsible parties will pay their full allocable share of the joint and several remediation liability
- c. Determine the percentage of the liability that will be allocated to the entity.

30-2 For purposes of estimating an entity's allocable share of the joint and several remediation liability for a site, those parties that are potentially responsible for paying the remediation liability belong to one of the following five potentially responsible party categories:

- a. Participating potentially responsible parties
- b. Recalcitrant potentially responsible parties
- c. Unproven potentially responsible parties
- d. Unknown potentially responsible parties
- e. Orphan share potentially responsible parties.

30-3 Over the duration of a remediation project, individual entities may move from one potentially responsible parties category to another.

30-4 In estimating its allocable share of the joint and several remediation liability for a site, there is a rebuttable presumption that costs will be allocated only among participating potentially responsible parties, as that category exists at the date of issuance of the financial statements.

30-5 An entity shall determine its allocable share of the joint and several remediation liability for a site based on its estimate of the allocation method and percentage that ultimately will be used for the entire remediation effort. The primary sources for this estimate shall be the allocation method and percentages that:

- a. The potentially responsible parties have agreed to (whether that agreement applies to the entire remediation effort or to the costs incurred in the current phase of the remediation process)
- b. Have been assigned by a consultant
- c. Have been determined by the Environmental Protection Agency.

30-6 If the entity's estimate of the ultimate allocation method and percentage differs significantly from the method or percentage from these primary sources, the entity's estimate should be based on objective, verifiable information. Examples of objective, verifiable information include all of the following:

- a. Existing data about the kinds and quantities of waste at the site
- b. Experience with allocation approaches in comparable situations
- c. Reports of environmental specialists (internal or external)
- d. Internal data refuting Environmental Protection Agency allegations about the entity's contribution of waste (kind, volume, and so forth) to the site.

30-7 An entity should assess the likelihood that each potentially responsible party will pay its allocable share of the joint and several remediation liability. That assessment should be based primarily on the financial condition of the participating potentially responsible party. This assessment requires the entity to gain an understanding of the financial condition of the other participating potentially responsible parties and to update and monitor this information as the remediation progresses. The entity shall include in its liability its share of amounts related to the site that will not be paid by other potentially responsible parties or the government.

> Costs to Be Included in Remediation Liability

30-8 Once an entity has determined that it is probable that an environmental remediation liability has been incurred, the entity shall estimate that liability based on available information (see also paragraphs 410-30-25-7 through 25-13). The estimate of the liability shall include the entity's:

- a. Allocable share of the liability for a specific site

- b. Share of amounts related to the site that will not be paid by other potentially responsible parties or the government.

30-9 Making the appropriate measurement of an entity's remediation liability involves the following issues:

- a. Costs that should be included in the measurement
- b. Whether the measurement should consider the effects of expected future events or developments, including discounting considerations
- c. How the measurement should be affected by the existence of other potentially responsible parties
- d. How the measurement should be affected by potential recoveries.

30-10 Costs to be included in the measurement are the following:

- a. Incremental direct costs of the remediation effort (see paragraph [410-30-55-1](#))
- b. Costs of compensation and benefits for those employees who are expected to devote a significant amount of time directly to the remediation effort, to the extent of the time expected to be spent directly on the remediation effort.

30-11 The remediation effort is considered on a site-by-site basis; it includes the following:

- a. Precleanup activities, such as the performance of a remedial investigation, risk assessment, or feasibility study and the preparation of a **remedial action** plan and remedial designs for a Superfund site, or the performance of a Resource Conservation and Recovery Act of 1976 facility assessment, facility investigation, or corrective measures studies
- b. Performance of remedial actions under Superfund, corrective actions under the Resource Conservation and Recovery Act of 1976, and analogous actions under state and non-U.S. laws
- c. Government oversight and enforcement-related activities
- d. Operation and maintenance of the remedy, including required postremediation monitoring.

30-12 Determining any of the following is part of the remediation effort:

- a. The extent of remedial actions that are required
- b. The type of remedial actions to be used
- c. The allocation of costs among potentially responsible parties.

The costs of making such determinations, including legal costs, shall be included in the measurement of the remediation liability.

30-13 The costs of services related to routine environmental compliance matters and litigation costs involved with potential recoveries are not part of the remediation effort.

30-14 Litigation costs involved with potential recoveries shall be charged to expense as incurred until realization of the claim for recovery is considered probable and an asset relating to the recovery is recognized, at which time any remaining such legal costs shall be considered in the measurement of the recovery.

30-15 The determination of what legal costs are for potential recoveries rather than for determining the allocation of costs among potentially responsible parties will depend on the specific facts and circumstances of each situation. For purposes of measuring environmental remediation liabilities, the measurement shall be based on enacted laws and adopted regulations and policies. No changes should be anticipated. The remedial action plan that is used to develop the estimate of the liability shall be based on the methodology that is expected to be approved to complete the remediation effort.

30-16 Costs to defend against assertions of liability in the context of environmental remediation liabilities involve determining whether an entity is responsible for participating in a remediation process.

30-17 The measurement of environmental remediation liabilities shall be based on the reporting entity's estimate of what it will cost to perform each of the elements of the remediation effort (determined in accordance with paragraphs [410-30-30-11 through 30-15](#)) when those elements are expected to be performed. Although this approach is sometimes referred to as considering inflation, it does not simply rely on an inflation index (cost estimates submitted to the Environmental Protection Agency usually include a prescribed inflation factor) and should take into account factors such as productivity improvements due to learning from experience with similar sites and similar remedial action plans. In situations in which it is not practicable to estimate inflation and such other factors because of uncertainty about the timing of expenditures, a current-cost estimate would be the minimum in the range of the liability to be recorded until such time as these cost effects can be reasonably estimated.

30-18 When an overall liability is estimated by combining estimates of various components of the liability, additional possible losses present in the component estimates must be considered in determining an overall additional possible loss.

> > Probable Recoveries

30-19 A probable recovery shall be measured at its undiscounted amount if both of the following criteria are met:

- a. The liability is not discounted.
- b. The timing of the recovery is dependent on the timing of the payment of the liability.

For implementation guidance on the second criterion, see paragraph [410-30-55-6](#).

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410-30-35 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > 35 Subsequent Measurement

General

Subsection revised 01-Oct-2012

Combine Subsections

> Changes in Estimates

35-1 Changes in estimates of the entity's remediation liability, including revisions to the entity's estimate of its share of the liability due to negotiation or identification of other potentially responsible parties, shall be accounted for as changes in estimates (see Topic [250](#)).

> Effects of Expected Future Events and Developments

35-2 Additional complexities arise if other potentially responsible parties are involved in an identified site. The costs associated with remediation of a site ultimately will be assigned and allocated among the various potentially responsible parties. The final allocation of costs may not be known, however, until the remediation effort is substantially complete, and it may or may not be based on an entity's relative direct responsibility at a site. An entity's final obligation depends, among other things, on the willingness of the entity and other potentially responsible parties to negotiate a cost allocation, the results of the entity's negotiation efforts, and the ability of other potentially responsible parties associated with the particular site to fund the remediation effort.

35-3 The time period necessary to remediate a particular site may extend several years, and the laws governing the remediation process and the technology available to complete the **remedial action** may change before the remedial action is complete. Additionally, the impact of inflation and productivity improvements can change the estimates of costs to be incurred.

35-4 The impact of changes in laws, regulations, and policies shall be recognized when such changes are enacted or adopted.

35-5 Once a methodology has been approved, that methodology and the technology available shall be the basis for estimating the liability until it is probable that there will be formal acceptance of a revised methodology.

> Impairment Tests

35-6 For guidance on impairment tests of assets subject to asset retirement obligations, see paragraphs [360-10-35-18 through 35-19](#).

> Impact of Potential Recoveries

35-7 Remediation technology is changing constantly, and, in many cases, new technologies have resulted in modified costs for environmental remediation (see the following paragraph).

35-8 Potential recoveries of amounts expended for environmental remediation are distinguishable from the allocation of costs subject to **joint and several liability**, which is discussed in paragraphs [410-30-30-1 through 30-7](#). Potential recoveries may be claimed from a number of different parties or sources, including insurers, potentially responsible parties other than participating potentially responsible parties (see paragraph [410-30-30-2](#)), and governmental or third-party funds. The amount of an environmental remediation liability should be determined independently from any potential claim for recovery, and an asset relating to the recovery shall be recognized only when realization of the claim for recovery is deemed probable. The term *probable* is used in this Subtopic with the specific technical meaning in paragraph [450-20-25-1](#).

35-9 If the claim is the subject of litigation, a rebuttable presumption exists that realization of the claim is not probable.

35-10 The amount of a potential recovery is measured based on available information and the specific situation (see paragraph [410-30-30-15](#)). As indicated in paragraphs [410-30-30-12 through 30-15](#), measurement of a potential recovery requires consideration of transaction costs related to the receipt of the recovery. The time value of money shall be considered in the measurement of a potential recovery when the measurement of the liability considers the time value of money.

35-11 However, the time value of money should not be considered in the determination of the recorded amount of a potential recovery if the

liability is not discounted and the timing of the recovery is dependent on the timing of the payment of the liability. In most circumstances, the point in time at which a liability for environmental remediation is both probable and reasonably estimable will precede the point in time at which any related recovery is probable of realization.

35-12 The measurement of the liability, or of a component of the liability, may be discounted to reflect the time value of money if the aggregate amount of the liability or component and the amount and timing of cash payments for the liability or component are fixed or reliably determinable. (Note that these criteria would not be met in situations in which paragraph 410-30-30-17 permits use of a current-cost estimate.) For this purpose, the amount of the liability or component is the reporting entity's allocable share of the undiscounted joint and several liability for the remediation effort or of a component of that liability.

> > Probable Recoveries

35-12A Paragraph 410-30-30-19 states criteria under which a probable recovery shall be measured at its undiscounted amount.

35-13 Paragraph Not Used

> Tangible Assets Acquired to Treat Environmental Contamination

35-14 Tangible assets that have been capitalized under paragraph 410-30-25-19 shall be depreciated over their remaining useful lives.

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410-30-45 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > 45 Other Presentation Matters

General

Subsection revised 01-Jul-2009

[Combine Subsections](#)

45-1 An entity's balance sheet may include several assets that relate to an environmental remediation obligation. Among them are the following:

- a. Receivables from other potentially responsible parties that are not providing initial funding
- b. Anticipated recoveries from insurers
- c. Anticipated recoveries from prior owners as a result of indemnification agreements.

45-2 A debtor that has a right of setoff that meets all of the conditions in paragraph 210-20-45-1 may offset the related asset and liability and report the net amount. It would be rare, if ever, that the facts and circumstances surrounding environmental remediation liabilities and related receivables and potential recoveries would meet all of these conditions.

45-3 The incurrence of environmental remediation obligations is not an event that is unusual in nature. As such, the related costs and recoveries do not meet the criteria for classification as extraordinary.

45-4 Furthermore, it is particularly difficult to substantiate the classification of environmental remediation costs as a component of nonoperating expenses. Because the events underlying the incurrence of the obligation relate to an entity's operations, remediation costs shall be charged against operations. Although charging the costs of remediating past environmental impacts against current operations may appear debatable because of the time between the contribution or transportation of waste materials containing hazardous substances to a site and the subsequent incurrence of remediation costs, environmental remediation-related expenses have become a regular cost of conducting economic activity. Accordingly, environmental remediation-related expenses shall be reported as a component of operating income in income statements that classify items as operating or nonoperating. Credits arising from recoveries of environmental losses from other parties shall be reflected in the same income statement line. Any earnings on assets that are reflected on the entity's financial statements and are earmarked for funding its environmental liabilities shall be reported as investment income.

45-5 Environmental remediation-related expenses and related recoveries attributable to discontinued operations that were accounted for as such in accordance with Subtopic 205-20 shall be classified as discontinued operations.

45-6 Asbestos treatment costs that are charged to expense are not extraordinary items under Subtopic 225-20.

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410-30-50 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > 50 Disclosure

General

Subsection revised 01-Jul-2009

Combine Subsections

50-1 Disclosure issues are discussed in the context of the following:

- a. Accounting principles
- b. Environmental remediation loss contingencies
- c. Environmental remediation costs recognized currently
- d. Conclusions on loss contingencies and other matters.

50-2 The disclosures discussed in these contexts are two-tiered:

- a. Disclosures that are required
- b. Disclosures that are encouraged, but not required.

50-3 This Subtopic does not discourage entities from disclosing additional information that they believe will further users' understanding of the entity's financial statements.

> Disclosures that Are Required

50-4 With respect to environmental remediation obligations, financial statements shall disclose whether the accrual for environmental remediation liabilities is measured on a discounted basis. If an entity utilizes present-value measurement techniques, additional disclosures are appropriate, and are discussed further in paragraph [410-30-50-7](#) (see paragraph [410-30-55-14](#)).

50-5 Subtopic [450-20](#) provides the primary guidance applicable to disclosures of environmental remediation loss contingencies.

50-6 The disclosure requirements of Subtopic [275-10](#) also apply to environmental remediation liabilities. Example 1 (paragraph [410-30-55-7](#)) illustrates the application of those disclosure requirements.

50-7 With respect to recorded accruals for environmental remediation loss contingencies and assets for third-party recoveries related to environmental remediation obligations, financial statements shall disclose if any portion of the accrued obligation is discounted, the undiscounted amount of the obligation, and the discount rate used in the present-value determinations.

> Disclosures that Are Encouraged but Not Required

50-8 Because environmental remediation costs have become increasingly significant, and because the accounting for many environmental loss contingencies often involves subjective judgments, disclosure of accrual benchmarks for remediation obligations is useful to further users' understanding of the entity's financial statements. Accordingly, entities are encouraged, but not required, to disclose the event, situation, or set of circumstances that generally triggers recognition of loss contingencies that arise out of the entity's environmental remediation-related obligations (for example, during or upon completion of the feasibility study). Also, entities are encouraged to disclose their policy concerning the timing of recognition of recoveries. (See Example 2 [paragraph [410-30-55-14](#)].)

50-9 Uncertainties associated with environmental remediation loss contingencies are pervasive, and they often result in wide ranges of reasonably possible losses with respect to such contingencies. Further, resolution of the uncertainties and the cash-flow effects of the loss contingencies often occur over a span of many years. Accordingly, this Subtopic encourages, but does not require, additional specific disclosures with respect to environmental remediation loss contingencies that would be useful to further users' understanding of the entity's financial statements.

50-10 Entities also are encouraged (see paragraph [410-30-55-15](#) through [55-16](#), but not required, to disclose the following:

- a. The estimated time frame of disbursements for recorded amounts if expenditures are expected to continue over the long term
- b. The estimated time frame for realization of recognized probable recoveries, if realization is not expected in the near term
- c. If an estimate of the probable or reasonably possible loss or range of loss cannot be made, the reasons why it cannot be made
- d. If information about the reasonably possible loss or the recognized and additional reasonably possible loss for an environmental remediation obligation related to an individual site is relevant to an understanding of the financial position, cash flows, or results of operations of the entity, the following with respect to the site:

1. The total amount accrued for the site
2. The nature of any reasonably possible loss contingency or additional loss, and an estimate of the possible loss or the fact that an estimate cannot be made and the reasons why it cannot be made
3. Whether other potentially responsible parties are involved and the entity's estimated share of the obligation
4. The status of regulatory proceedings
5. The estimated time frame for resolution of the contingency.

50-11 Entities also are encouraged, but not required, to disclose the estimated time frame for resolution of the uncertainty as to the amount of the loss (see paragraph [410-30-55-17](#)).

50-12 Entities are encouraged but not required to disclose the amount of environmental remediation costs recognized in the income statement in the following detail:

- a. The amount recognized for environmental remediation loss contingencies in each period
- b. The amount of any recovery from third parties that is credited to environmental remediation costs in each period
- c. The income statement caption in which environmental remediation costs and credits are included.

See paragraphs [410-30-55-14 through 55-15](#).

> Disclosure Related to Loss Contingencies

50-13 Whether notification by regulatory authorities in relation to particular environmental laws and regulations constitutes the assertion of a claim is a matter of legal determination. If an entity concludes that it has no current **legal obligation** to remediate a situation of probable or possible environmental impact, then in accordance with paragraph [450-20-50-6](#) no disclosure is required. However, if an entity is required by existing laws and regulations to report the **release** of hazardous substances and to begin a remediation study or if assertion of a claim is deemed probable, the matter would represent a loss contingency subject to the disclosure provisions of paragraphs [450-20-50-3 through 50-4](#), regardless of a lack of involvement by a regulatory agency.

50-14 Financial statements may include a contingency conclusion that addresses the estimated total unrecognized exposure to environmental remediation and other loss contingencies. Such contingency conclusions may state, for example, that "management believes that the outcome of these uncertainties should not have [or "may have"] a material adverse effect on the financial condition, cash flows, or operating results of the entity." Alternatively, the disclosure may indicate that the adverse effect could be material to a particular financial statement or to results and cash flows of a quarterly or annual reporting period.

50-15 Although potentially useful information, these conclusions are not a substitute for the required disclosures of this Subtopic and of Subtopic [450-20](#), such as their requirement to disclose the amounts of material reasonably possible additional losses or to state that such an estimate cannot be made.

50-16 Also, the assertion that the outcome should not have a material adverse effect must be supportable. If the entity is unable to estimate the maximum end of the range of possible outcomes, it may be difficult to support an assertion that the outcome should not have a material adverse effect.

50-17 Entities may wish to provide a description of the general applicability and impact of environmental laws and regulations upon their business and how the existence of such laws and regulations may give rise to loss contingencies for future environmental remediation. Such disclosures often acknowledge the uncertainty of the effect of possible future changes to environmental laws and their application, and they are frequently made on an aggregated basis, considering the entity's total exposures for all its environmental sites.

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410-30-55 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > 55 Implementation Guidance and Illustrations

General

Subsection revised 01-Jul-2009

[Combine Subsections](#)

> Implementation Guidance

> > Incremental Direct Costs

55-1 This implementation guidance illustrates paragraphs [410-30-30-10 through 30-11](#). Examples of incremental direct costs of the remediation effort include the following:

- a. Fees to outside law firms for work related to determining the extent of **remedial actions** that are required, the type of remedial actions to be used, or the allocation of costs among potentially responsible parties
- b. Costs related to completing the **remedial investigation-feasibility study**
- c. Fees to outside engineering and consulting firms for site investigations and the development of remedial action plans and remedial designs
- d. Costs of contractors performing remedial actions
- e. Governmental oversight costs and past costs; usually this is based on the cost incurred by the Environmental Protection Agency or other governmental authority dealing with the site
- f. The cost of machinery and equipment that is dedicated to the remedial actions and that does not have an alternative use
- g. Assessments by a potentially responsible party group covering costs incurred by the group in dealing with a site
- h. Costs of operation and maintenance of the remedial action, including the costs of postremediation monitoring required by the remedial action plan.

55-2 Examples of employees who may devote a significant amount of time directly to the remediation effort include the following:

- a. The internal legal staff that is involved with the determination of the extent of remedial actions that are required, the type of remedial action to be used, and the allocation of costs among potentially responsible parties
- b. Technical employees who are involved with the remediation effort.

55-3 Estimates of the compensation and benefits costs to be incurred for a specific site should be made in connection with the initial recording of the remediation liability and subsequently adjusted at each reporting date to reflect the current estimate of such costs to be incurred in the future.

> > Liability Allocation Among Potentially Responsible Parties

55-4 There are numerous ways to allocate liabilities among potentially responsible parties. The four principal factors considered in a typical allocation process are the following:

- a. Elements of fair share. Examples are the amount of waste based on volume; the amount of waste based on mass, type of waste, toxicity of waste; the length of time the site was used.
- b. Classification of potentially responsible party. Examples are site owner, site operator, transporter of waste, generator of waste.
- c. Limitations on payments. This characteristic includes any statutory or regulatory limitations on contributions that may be applicable to a potentially responsible party. For example, in the reauthorization of the Comprehensive Environmental Response, Compensation, and Liability Act, it has been proposed that the statute limit the contribution of a municipality to 10 percent of the total remediation liability, irrespective of the municipality's allocable share.
- d. Degree of care. This refers to the degree of care exercised in selecting the site or in selecting a transporter.

55-5 Potentially responsible parties may reach an agreement among themselves as to the allocation method and percentages to be used, they may hire an allocation consultant whose conclusions may or may not be binding, or they may request a nonbinding allocation of responsibility from the Environmental Protection Agency. The allocation method or percentages used may change as the remediation project moves forward. An agreement to reallocate the preliminarily allocated liability at the end of the remediation project may exist, or the allocation percentages may be adjusted during the project to reflect prior allocations that subsequently are agreed to have been inequitable. This implementation guidance illustrates paragraph [410-30-30-1](#).

> > Probable Recoveries

55-6 This implementation guidance addresses the criterion in paragraph [410-30-30-19\(b\)](#) involving the dependency of the timing of the recovery on the timing of the payment of the liability. That criterion would usually be met, for example, if an insurance entity agrees, in accordance with the terms of an insurance contract, to reimburse the reporting entity for all or a percentage of the remediation costs incurred by the reporting entity as the reporting entity expends money to satisfy its obligation. That criterion likely would not be met, for example, in a lump-sum buyout by an insurance entity of contested coverage.

> Illustrations

> > Example 1: Environmental Remediation Liabilities Disclosures

55-7 This Example illustrates application of the disclosure requirements of Subtopic [275-10](#).

55-8 Ace Oil Company is a distributor of heating oil with four storage and distribution facilities located in Anystate. Federal, state, and local laws and regulations govern the operation of the entity's facilities. The entity has determined that, beginning in the coming year, a significant number of its storage tanks and a significant amount of its other equipment will need to be removed, replaced, or modified to satisfy regulations that go into effect in varying stages over the next seven years. In addition, the entity has a present obligation to decontaminate the soil in the near term at its largest facility.

55-9 The entity hired a consultant to evaluate the technological, regulatory, and legal factors involved. Based on the consultant's findings, the entity estimated that total environmental expenditures over the next 7 years related to the tanks and equipment will aggregate approximately \$5 million. Of this amount, approximately \$4.75 million represents capital expenditures, which are expected to be recoverable through operations. The existing tanks have a net book value of \$500,000, and the equipment has a net book value of \$475,000. The cost of soil decontamination is estimated to be at least \$1 million, which is material to the entity's operations, and may be as high as \$3 million. Exposure to legal liability to third parties is considered remote.

55-10 The consultant has demonstrated substantial experience with similar sites, and the technical aspects of upgrading storage facilities and decontaminating soil appear to be fairly straightforward.

55-11 The entity would disclose the following. (The italicized text illustrates the voluntary disclosure that is encouraged by paragraph 275-10-50-9.)

The entity will begin a project to decontaminate the soil at its Anytown, Anystate facility in the coming year. The entity estimates the cost of decontamination to total at least \$1 million and has accrued that amount as an operating expense in the current year. The ultimate cost, however, *will depend on the extent of contamination found as the project progresses and* may be as much as \$3 million. The entity expects decontamination to be substantially completed within one year.

55-12 This disclosure informs financial statement users of the existence of the soil contamination problem at the financial statement date and indicates that the liability is susceptible to change in the near term. This Subtopic does not require disclosure of the capital commitment because it is not a present obligation for which an estimate is reflected in the entity's financial statements.

55-13 Although, in this Example, the near-term nature of the possible change is indicated by a statement that the entity expects decontamination to be substantially completed within one year, an expectation that decontamination will take more than one year to complete would not preclude the estimate from being susceptible to near-term change. In such cases, the disclosure could be worded to specifically refer to the near term.

> > Example 2: Disclosure for Environmental Remediation Costs

55-14 This Example illustrates the guidance in paragraph 410-30-50-4 for accounting policies note disclosure for environmental remediation-related costs (information that is enclosed in brackets is not required).

Environmental Remediation Costs—[Entity A accrues for losses associated with environmental remediation obligations when such losses are probable and reasonably estimable. Accruals for estimated losses from environmental remediation obligations generally are recognized no later than completion of the remedial feasibility study. Such accruals are adjusted as further information develops or circumstances change.] Costs of future expenditures for environmental remediation obligations are not discounted to their present value. [Recoveries of environmental remediation costs from other parties are recorded as assets when their receipt is deemed probable.]

> > Example 3: Disclosure with Numerous Potential Outcomes

55-15 This Example illustrates the guidance in paragraph 410-30-50-10 for disclosure for a situation in which all of the following conditions exist:

- An entity is involved in a single environmental site at which a number of potential outcomes may occur.
- There is a probable, reasonably estimable recovery from a third party.
- The entity has accrued for the most likely outcome within a range of possible outcomes for each component.
- The nature of the amounts accrued for remediation and the related probable recovery are necessary to be disclosed in order for the financial statements not to be misleading.
- There is a reasonably possible loss exposure in excess of the amount accrued that is material and it is reasonably possible that a change in estimate that would be material to the financial statements will occur in the near term.

55-16 The entity would make the following disclosure (information that is enclosed in brackets is not required).

Entity A has been notified by the Environmental Protection Agency that it is a potentially responsible party under Superfund legislation [with respect to XYZ site in Sometown, USA, a disposal site previously used in its chemical-fertilizer business. The Environmental Protection Agency has also identified 10 other potentially responsible parties for XYZ. A remedial investigation and feasibility study has been completed, and the results of that study have been forwarded to the Environmental Protection Agency. The study indicates a range of viable remedial approaches, but agreement has not yet been reached with the Environmental Protection Agency on the final remediation approach. The potentially responsible party group has preliminarily agreed to an allocation that sets Entity A's share of the cost of remediating XYZ site at 6 percent.] Entity A has accrued its best estimate of its obligation with respect to the site at December 31, 199X, [which is \$10 million and which is included in long-term liabilities and is expected to be disbursed over the next

10 years. If certain of the potentially responsible parties are ultimately not able to fund their allocated shares or the Environmental Protection Agency insists on a more expensive remediation approach.] Entity A could incur additional obligations of up to \$7 million. It is reasonably possible that Entity A's recorded estimate of its obligation may change in the near term.

With respect to the environmental obligation discussed above, the site was acquired in 1982, and, in connection with that acquisition, the former owner partially indemnified Entity A for environmental impacts occurring before the acquisition. [Based on existing documentation indicating the years in which the business shipped wastes to XYZ and the terms of the indemnification in the acquisition agreement.] Entity A [believes it is probable that it will recover from the prior owners 50 percent of its allocated remediation costs for XYZ and, accordingly,] has recorded a receivable of \$5 million at December 31, 199X.

> > Example 4: Disclosure of Loss Contingency

55-17 This Example illustrates the guidance in paragraph 410-30-50-11. An entity would make the following disclosure of a probable but not yet reasonably estimable environmental remediation loss contingency (information that enclosed in brackets is not required).

Entity A has been notified by the Environmental Protection Agency that it is a potentially responsible party with respect to environmental impacts [identified at the XYZ site in Sometown, USA. Several meetings have been held with the Environmental Protection Agency and the other identified potentially responsible parties, and a remedial investigation has recently commenced]. Although a loss is probable, it is not possible at this time to reasonably estimate the amount of any obligation for remediation [of XYZ site] that would be material to Entity A's financial statements [because the extent of environmental impact, allocation among the potentially responsible parties, remediation alternatives (which could involve no or minimal efforts), and concurrence of the regulatory authorities have not yet advanced to the stage where a reasonable estimate of any loss that would be material to the entity can be made]. [A reasonable estimate of a material obligation, if any, is expected to be possible in 199X.]

> > Example 5: Illustrations of Whether Costs to Treat Environmental Contamination Should Be Capitalized or Charged to Expense

55-18 The following Cases illustrate the guidance in paragraphs 410-30-25-16 through 25-19:

- a. Tanker oil spill (Case A)
- b. Rusty chemical storage tank (Case B)
- c. Air pollution caused by manufacturing activities (Case C)
- d. Lead pipes in office building that contaminate drinking water (Case D)
- e. Soil contamination caused by an operating garbage dump (Case E)
- f. Water well contamination (Case F)
- g. Underground gasoline storage tank leak (Case G)
- h. Air in office building contaminated with asbestos fibers (Case H).

> > > Case A: Tanker Oil Spill

55-19 The following table provides a summary for determining whether costs to treat environmental contamination should be capitalized or charged to expense.

Environmental Contamination, Treatments	Evaluation of Criteria
Tanker Oil Spill: A. Clean up waterway and beachfront	<ol style="list-style-type: none"> 1. Costs to clean up the waterway and beachfront are not eligible for consideration under the first criterion because the oil company does not own the property. 2. The cleanup of the waterway and beachfront does not mitigate or prevent a future oil spill from future operations. 3. The waterway and beachfront are not owned assets and, therefore, the third criterion does not apply. <p>Conclusion: Costs incurred for cleanup and restoration in connection with the oil spill should be charged to expense.</p>
B. Reinforce tanker's hull to reduce risk of future spill	<ol style="list-style-type: none"> 1. Reinforcing the hull improves the tanker's safety compared to when the tanker was originally constructed or acquired. 2. Reinforcing the hull mitigates the risk that the tanker will experience a similar oil spill during future operations and improves the tanker's safety compared to when the tanker was originally constructed or acquired. <p>Conclusion: The costs incurred in connection with reinforcing the tanker's hull may be capitalized under either the first or second criterion.</p>

> > > Case B: Rusty Chemical Storage Tank

55-20 The following table provides a summary for determining whether costs to treat environmental contamination should be capitalized or charged to expense.

Environmental Contamination, Treatments	Evaluation of Criteria
Rusty Chemical Storage Tank:	
A. Remove rust that developed during ownership	<p>1. Removing the rust has not improved the tank compared with its condition when built or acquired.</p> <p>2. Removing the rust has mitigated the possibility of future leaks. However, removing the rust has not improved the tank compared with its condition when built or acquired.</p> <p>Conclusion: Rust removal costs should be expensed unless the tank is currently held for sale and the costs were incurred to prepare the tank for sale.</p>
B. Apply rust prevention chemicals	<p>1. The application of rust prevention chemicals has improved the tank's condition compared with its condition when built or acquired.</p> <p>2. Rust prevention chemicals mitigate the possibility that future rust will cause leaks and also improve the tank's condition compared with its condition when built or acquired.</p> <p>Conclusion: The costs of applying the rust prevention chemicals may be capitalized under either the first or second criterion.</p>

> > > Case C: Air Pollution Caused by Manufacturing Activities

55-21 The following table provides a summary for determining whether costs to treat environmental contamination should be capitalized or charged to expense.

Environmental Contamination, Treatments	Evaluation of Criteria
Air Pollution Caused by Manufacturing Activities:	
A. Acquire and install pollution control equipment	<p>1. The pollution control equipment improves the safety of the plant compared with its condition when built or acquired.</p> <p>2. The pollution control equipment mitigates or prevents air pollution that has yet to occur but that may otherwise result from future operation of the plant and improves the safety of the plant compared with its condition when built or acquired.</p> <p>Conclusion: Costs associated with acquisition and installation of the pollution control equipment may be capitalized under either the first or second criterion.</p>
B. Pay fines for violations of the Clean Air Act	<p>1. Payment of fines does not extend the plant's life, increase its capacity, or improve its efficiency or safety.</p> <p>2. Payment of fines does not mitigate or prevent pollution that has yet to occur but that may otherwise result from future operation of the plant.</p> <p>Conclusion: Fines paid in connection with violations of the Clean Air Act should be charged to expense. Even if the plant is currently held for sale, the fines should be charged to expense because the costs would not have been incurred to prepare the plant for sale.</p>

> > > Case D: Lead Pipes in Office Building that Contaminate Drinking Water

55-22 The following table provides a summary for determining whether costs to treat environmental contamination should be capitalized or charged to expense.

Environmental Contamination, Treatments	Evaluation of Criteria
Water Well Contamination Caused by Chemicals That Leaked into Wells Containing Water That Will Be Used in Future Beer Production:	<ol style="list-style-type: none"> 1. The treatment does not extend the life of the wells, increase their capacity, or improve efficiency. The condition of the water is not safer after the treatment compared to when the wells were initially acquired. 2. By neutralizing the water, the possibility of future contamination of the wells from future operations has not been mitigated or prevented.
A. Neutralize water in wells	<p>Conclusion: Costs incurred to neutralize well water should be charged to expense unless the wells were held for sale and the costs were incurred to prepare the wells for sale.</p>
B. Install water filters	<ol style="list-style-type: none"> 1. The water filters improve the safety of the wells compared with their uncontaminated state when built or acquired. 2. The water filters address future problems that may result from future operations. Since the water filters are effective in filtering environmental contamination, they mitigate the effect of spilling new contaminants into the wells during future operations. In addition, the water filters represent an improvement compared with the wells' original condition without water filters. <p>Conclusion: The water filtering system may be capitalized under either the first or the second criterion.</p>

>>> Case G: Underground Gasoline Storage Tank Leak

55-25 The following table provides a summary for determining whether costs to treat environmental contamination should be capitalized or charged to expense.

Environmental Contamination, Treatments	Evaluation of Criteria
Underground Gasoline Storage Tanks Leak and Contaminate the Company's Property:	<ol style="list-style-type: none"> 1. Soil refinement does not extend the useful life, increase the capacity, or improve the efficiency or safety of the land relative to its unpolluted state when acquired. 2. By refining the contaminated soil, the oil company has addressed an existing problem. However, the company has not mitigated or prevented future leaks during future operations.
A. Refine soil	<p>Conclusion: Soil refining costs should be charged to expense unless the property is currently held for sale and the costs were incurred to prepare the property for sale.</p>
B. Encase tanks so as to prevent future leaks from contaminating surrounding soil	<ol style="list-style-type: none"> 1. In some cases, encasement may increase the life of the tanks because of their increased resistance to corrosion, leaking, etc. In other situations, the treatment may not increase the life of the tanks. However, the encasement has improved the tanks' safety compared with their condition when built or acquired. 2. Encasement has mitigated or prevented future leakage and soil contamination that might otherwise result from future operations. In addition, the encasement has improved the tanks' safety compared with their condition when built or acquired. <p>Conclusion: The cost of encasement may be capitalized under either the first or the second criterion.</p>

>>> Case H: Air in Office Building Contaminated with Asbestos Fibers

55-26 The following table provides a summary for determining whether costs to treat environmental contamination should be capitalized or charged to expense.

Environmental Contamination, Treatments	Evaluation of Criteria
<p>Air in Office Building Contaminated with Asbestos Fibers:</p> <p>A. Remove asbestos</p>	<p>1. Removal of the asbestos improves the building's safety over its original condition since the environmental contamination (asbestos) existed when the building was constructed or acquired.</p> <p>2. By removing the asbestos, the building's owner has eliminated an existing problem and has prevented any further contamination from that asbestos. However, by removing the existing asbestos, the building's owner has not mitigated or prevented new environmental problems, if any, that might result from future operation of the building.</p> <p>Conclusion: Asbestos removal costs may be capitalized as a betterment under the first criterion.</p>

>> Example 6: Remediation Liability Case Study

55-27 This Example illustrates the application of the recognition and measurement guidance provided in Sections 410-30-25 and 410-30-30; it does not illustrate all disclosure requirements set forth in this Subtopic.

55-28 Prior to 1980, the XYZ Manufacturing Company contracted with a state-licensed waste hauling contractor to remove specified, nonhazardous solid and liquid industrial waste from one of its plants for disposal off-site at a state-licensed disposal facility. A purchase order was let, and the work was performed. The contractor complied with all applicable laws and regulations, and monthly reports were filed with appropriate state environmental agencies.

55-29 In 1986, the entity received an information request from the Environmental Protection Agency pursuant to section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The information request stated that the Environmental Protection Agency believed that hazardous substances at a site, now listed by the Environmental Protection Agency on its National Priorities List, were generated at XYZ's plant. XYZ was named as a potentially responsible party and was directed by the Environmental Protection Agency, under penalty of law, to search its records exhaustively and answer a series of questions possibly implicating it directly to the site, or indirectly by its having used one or more transporters the Environmental Protection Agency said it was also investigating.

55-30 XYZ searched its records as directed and determined late in 1986 that it had, in fact, contributed hazardous substances to the site. XYZ could not, however, determine how significant the hazardous substances it had sent to the site were in relation to the total population of hazardous substances at the site. The minimum remediation cost, including a minimum amount of legal fees, that XYZ was able to estimate was not material to its financial statements. XYZ was able, however, to determine that it was reasonably possible that its ultimate liability could be material.

55-31 In 1987 the Environmental Protection Agency identified a number of waste generators, transporters, and site owner-operators as likely potentially responsible parties. The identified potentially responsible parties were invited to a meeting at which government lawyers requested that one or more of the potentially responsible parties voluntarily perform a remedial investigation-feasibility study to evaluate existing site conditions (including a public health and ecological risk assessment) and to develop a proposed array of remedial alternatives from which the Environmental Protection Agency would select a remedy and demand that it be implemented. Standardized Environmental Protection Agency terms and conditions, stipulated penalty provisions, and indeterminate scope of work elements inhibited voluntary agreement among the potentially responsible parties, and so a **consent decree** was not achieved.

55-32 In 1988 the Environmental Protection Agency asserted the existence of "imminent and substantial endangerment" at the site early in 1988 under section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act, and it issued a **unilateral administrative order** to the potentially responsible party with the deepest pockets—XYZ—to undertake the remedial investigation-feasibility study.

55-33 Because triple damages are authorized under section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act, XYZ agreed to conduct the remedial investigation-feasibility study specified in the order and demanded that other identified potentially responsible parties participate in the effort. XYZ initially estimated the cost that would be incurred to perform the remedial investigation-feasibility study to be between \$1 million and \$2 million. Based on the limited information that was available about the site, information that XYZ had about its contribution to the site, and the number and financial condition of other potentially responsible parties, XYZ initially estimated that its ultimate share of this cost would prove to be in the range of 20 percent to 50 percent. XYZ also estimated that it would incur legal costs related to the remediation effort of \$200,000 to \$2 million in addition to any legal costs that might be incurred by any potentially responsible party group that might be formed. No amounts within any of these ranges were considered to be better estimates than any other amounts within any of these ranges. Because of a lack of information about the type and extent of the remediation effort that could be required, no range of cost of the overall remediation effort could be developed at this time.

55-34 Under threat of a contribution lawsuit by XYZ, a potentially responsible party group was formed late in 1988. The potentially responsible party group had the following three objectives:

- a. To implement the requirements of the unilateral administrative order in the most cost-effective and scientifically valid way
- b. To raise money and allocate costs among the potentially responsible parties willing to perform the work based on the types and

relative quantities of wastes shipped to the site or another agreed-upon formula

c. To recover costs from nonparticipating potentially responsible parties, if possible.

55-35 Because of the lack of a good data base of factual information upon which to make sound allocation decisions agreeable to all, outside arbitration was used in 1989 to allocate fair share costs among participating potentially responsible parties. The arbitrator preliminarily apportioned 65 percent of the costs for the site to the four participating potentially responsible parties, as follows.

XYZ	20%
Potentially responsible party No. 2	20
Potentially responsible party No. 3	15
Potentially responsible party No. 4	10
	<hr/>
	65%
Orphan share	25
Recalcitrant share	10
	<hr/>
	100%
	<hr/>

55-36 Twenty-five percent of the site was determined to be the **orphan share**, for which no potentially responsible party could be identified. Ten percent was attributed to two recalcitrant (nonparticipating) potentially responsible parties, and there was insufficient information to overcome the presumption that costs will be allocated only among the participating potentially responsible parties.

55-37 XYZ gained some understanding of the other participating potentially responsible parties' financial condition and believed each of them was able and likely to pay its full share of the costs of the remedial investigation-feasibility study. XYZ was concerned, however, about the ability of potentially responsible party No. 3 to pay its full share of the cost of the overall remediation effort.

55-38 Based on the amount already spent on legal costs and the results of potentially responsible party organization efforts, XYZ determined that \$350,000 was the best estimate of its separate legal costs. The estimate of the costs that will be incurred to perform the remedial investigation-feasibility study, which now included group administration costs, now stood at \$1.2 million to \$2.2 million.

55-39 The remedial investigation-feasibility study was substantially completed in 1991. No changes were made to the potentially responsible parties allocation percentages as a result of the remedial investigation-feasibility study completion. The potentially responsible party group's initial estimate of the cost of implementing the remedy expected to be required by the Environmental Protection Agency was \$25 million to \$30 million. No amount within this range was considered to be a better estimate than any other amount within the range. This estimate included estimates of the cost of all elements of the remediation effort, including common legal, engineering, construction, monitoring, operation and maintenance costs (including postremediation monitoring for a period of 30 years), and so forth.

55-40 XYZ believed that potentially responsible party No. 2 and potentially responsible party No. 4 could and would pay their full shares of the cost of the remediation effort. Potentially responsible party No. 3, however, indicated that, because of its deteriorating financial position, it would likely be unable to pay more than two-thirds of its 15 percent share and none of its allocated amount attributed to the orphan and recalcitrant shares, or 10 percent of those costs. XYZ shared potentially responsible party No. 3's views about potentially responsible party No. 3's ability to pay.

55-41 Three years after site studies began, the Environmental Protection Agency and its outside contractors evaluated the reports submitted under the terms of the unilateral administrative order. A record of decision was issued by the Environmental Protection Agency on September 30, 1992, in which remedial actions based on the remedial investigation-feasibility study were selected and cost estimates were presented. The potentially responsible parties were requested to voluntarily implement the record of decision and again sign up to the terms demanded by the government. No pre-enforcement federal court review is permitted, even if the remedy specified in the record of decision is scientifically flawed, unattainable by available, proven technology, non-cost-effective, or open-ended. The potentially responsible parties had the following choices: perform the remedy specified in the record of decision voluntarily, or refuse to do work, in which case the Environmental Protection Agency would either issue another unilateral administrative order or perform the work using its contractor procurement systems and sue the potentially responsible parties for cost recovery. The potentially responsible parties agreed to perform the remedy specified in the record of decision and entered into a consent judgment.

55-42 Note that the law requires the Environmental Protection Agency to review the record of decision and remedy within five years of its implementation by the potentially responsible parties. If the objectives of the record of decision have not been attained, the Environmental Protection Agency may make additional demands on the potentially responsible parties. If one or more potentially responsible parties believe they have paid a disproportionate share of the costs, they may track down other potentially responsible parties and sue them in a contribution action. Although requests for reimbursement from Superfund can also be made for allocations attributed to unidentified or unknown parties (the orphan share) under certain conditions, this is not usually allowed by terms and conditions of consent order settlements with the Environmental Protection Agency.

55-43 Subtopic **450-20** requires accrual of a loss contingency when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Receipt in 1986 of an information request did not establish that a liability was probable because, notwithstanding the Environmental Protection Agency's interest in XYZ's connection, if any, to the site, it had not been established that XYZ was in fact associated with the site. As noted in paragraph **410-30-25-4**, however, receipt of notification that an entity may be a potentially responsible party compels the entity to action.

55-44 When XYZ determined late in 1986 that it had, in fact, contributed hazardous substances to the site, the liability became probable. The criteria for recognition had not yet been met, however, because XYZ did not have sufficient information to reasonably estimate a minimum amount in the range of its liability that would be material to its financial statements. Disclosure of the nature of the contingency and a

statement that an estimate of the loss or range of loss cannot be made was required under Subtopic 450-20.

55-45 During 1987, little additional information that would aid XYZ in making an estimate of the loss or range of loss became available. Therefore, the accounting and disclosure for the contingent loss related to the remediation liability remained the same.

55-46 In 1988, when XYZ agreed to perform a remedial investigation-feasibility study in accordance with the Environmental Protection Agency's unilateral administrative order and the potentially responsible party group was formed, XYZ should have recorded a liability of \$400,000, computed as follows.

XYZ's estimated share of the minimum amount in the range of the estimated cost of the remedial investigation-feasibility study [20 percent of \$1,000,000]	\$ 200,000
XYZ's minimum estimate of its legal costs	200,000
	<u>\$ 400,000</u>

55-47 Because other potentially responsible parties had agreed during 1988 to participate in the remedial investigation-feasibility study effort, they are considered to be participating potentially responsible parties. Neither the fact that the unilateral administrative order named only XYZ nor the fact that a preliminary cost-sharing formula had not yet been determined by the arbitrator should have required XYZ to accrue more than its estimated allocable share of the minimum estimated liability.

55-48 Although no recognition benchmarks were achieved in 1989 or 1990, XYZ should have refined its estimate of its liability as additional significant information became available. For example, in 1989, when the preliminary cost-sharing formula was developed by the arbitrator and the estimate of the cost of the remedial investigation-feasibility study was revised, XYZ should have refined its estimate of its share of the cost of the remedial investigation-feasibility study and adjusted its liability to \$719,231, less any amounts already expended. \$719,231 is computed as follows.

XYZ's allocable share of the minimum amount in the range of the estimated cost of the remedial investigation-feasibility study [20 percent of \$1.2 million]	\$ 240,000
XYZ's pro rata share of amounts allocable to other parties but that are not expected to be paid by those other parties [20/65 of 35 percent of \$1.2 million]	129,231
XYZ's estimated legal costs	350,000
	<u>\$ 719,231</u>

55-49 By the time the feasibility study was substantially completed in 1991, XYZ should have adjusted its liability to reflect its estimated share of the minimum amount of the overall remediation liability. Based on the facts presented, this amount should be \$9,350,000, less any amounts already expended. \$9,350,000 is computed as follows.

20% of \$25 million	\$ 5,000,000
20/65 of 35 percent of \$25 million	2,692,308
20/50 of amount allocable to potentially responsible party No. 3 that is not expected to be paid by potentially responsible party No. 3 [20/50 of 5 percent of \$25 million plus 20/50 of 15/65 of 35 percent of \$25 million]	1,307,692
Estimated legal costs	350,000
	<u>\$ 9,350,000</u>

55-50 The estimate of the environmental remediation liability should be further refined when the record of decision is issued in 1992 and at various other points when additional information becomes available.

55-51 The measurement of the remediation liability should not have been discounted at any point during the period under discussion because the amount of the obligation and the amount and timing of cash payments were not fixed or reliably determinable.

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410-30-S00 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > S00 Status

General

Subsection revised 15-Sep-2009

Combine Subsections

S00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
410-30-S35-1	Added	Accounting Standards Update No. 2009-07	09/15/2009

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410-30-S30 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > S30 Initial Measurement

General

Subsection revised 01-Jul-2009

Combine Subsections

> Appropriate Discount Rate to Be Applied to a Product or Environmental Remediation Liability

S30-1 See paragraph 450-20-S99-1, SAB Topic 5.Y, Question 1, for SEC Staff views on the discount rate to be used in measuring product or environmental remediation liabilities.

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410-30-S35 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > S35 Subsequent Measurement

General

Subsection revised 15-Sep-2009

Combine Subsections

> Appropriate Discount Rate to Be Applied to a Product or Environmental Remediation Liability

S35-1 See paragraph 450-20-S99-1, SAB Topic 5.Y, Accounting and Disclosures Relating to Loss Contingencies, Question 1.

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410-30-S50 410 Asset Retirement and Environmental Obligations > 30 Environmental Obligations > S50 Disclosure

General

Sub section revised 01-Jul-2009

[Combine Subsections](#)**> Disclosures Related to Discounting an Environmental Liability**

S50-1 See paragraph [450-20-S99-1](#), SAB Topic 5.Y, Question 1, for SEC Staff views on disclosure requirements if an environmental remediation liability is recognized on a discounted basis.

> Disclosure Related to Loss Contingencies

S50-2 See paragraph [450-20-S99-1](#), SAB Topic 5.Y, Question 2, for SEC Staff views on the financial statement disclosures that should be furnished with respect to product and environmental remediation liabilities.

> Disclosures Related to Remediation Costs

S50-3 See paragraph [450-20-S99-1](#), SAB Topic 5.Y, Question 4, for SEC Staff views on disclosures pertaining to site restoration costs and other environmental remediation costs.

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980-410-05 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > 05 Overview and Background

General

Subsection revised 01-Jul-2009

Combine Subsections

05-1 This Subtopic provides guidance for asset retirement obligations for entities with regulated operations.

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980-410-15 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > 15 Scope and Scope Exceptions

General

Subsection revised 01-Jul-2009

Combine Subsections

> Overall Guidance

15-1 This Subtopic follows the same Scope and Scope Exceptions as outlined in the Overall Subtopic, see Section [980-10-15](#).

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980-410-25 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > 25 Recognition

General

Subsection revised 01-Jul-2009

[Combine Subsections](#)

> Decommissioning Costs

25-1 Nuclear plant decommissioning costs are incurred costs in the current accounting framework. Those costs and the related liabilities are imposed by regulation or statute, similar to the liability to restore the land after strip mining. Accordingly, paragraph [980-405-25-1\(b\)](#) does not address those costs.

> Costs from Asset Retirement Obligations

25-2 Many rate-regulated entities currently provide for the costs related to the retirement of certain long-lived assets in their financial statements and recover those amounts in rates charged to their customers. Some of those costs result from asset retirement obligations within the scope of Subtopic [410-20](#); others result from costs that are not within the scope of that Subtopic. The amounts charged to customers for the costs related to the retirement of long-lived assets may differ from the period costs recognized in accordance with that Subtopic and, therefore, may result in a difference in the timing of recognition of period costs for financial reporting and rate-making purposes. An additional recognition timing difference may exist when the costs related to the retirement of long-lived assets are included in amounts charged to customers but liabilities are not recognized in the financial statements. If the requirements of this Topic are met, a regulated entity also shall recognize a regulatory asset or liability for differences in the timing of recognition of the period costs associated with asset retirement obligations for financial reporting pursuant to that Subtopic and rate-making purposes.

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980-410-35 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > 35 Subsequent Measurement

General

Subsection revised 01-Jul-2009

[Combine Subsections](#)

35-1 The capitalized amount of an asset retirement cost shall be included in the assessment of impairment of long-lived assets of a rate-regulated entity just as that cost is included in the assessment of impairment of long-lived assets of any other entity. Subtopic [980-360](#) applies to the asset retirement cost related to a long-lived asset of a rate-regulated entity that has been closed or abandoned.

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980-410-75 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > 75 XBRL Elements

XBRL Links to Codification

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980-410-S00 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > S00 Status

General

Subsection revised 24-Aug-2009

Combine Subsections

S00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
980-410-S99-1	Amended	Accounting Standards Update No. 2009-03	08/24/2009

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980-410-S25 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > S25 Recognition

General

Subsection revised 01-Jul-2009

Combine Subsections

> Environmental Remediation Liabilities

S25-1 See paragraph [980-410-S99-1](#), SAB Topic 10.F, Question 2, for SEC Staff views on the recognition of environmental remediation liabilities.

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General

Subsection revised 01-Jul-2009

Combine Subsections

> Presentation of Liabilities for Environmental Costs

S45-1 See paragraph [980-410-S99-1](#), SAB Topic 10.F, Question 1, for SEC Staff views on the presentation of environmental remediation liabilities.

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Subsection revised

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980-410-S99 980 Regulated Operations > 410 Asset Retirement and Environmental Obligations > S99 SEC Materials

General

Subsection revised 24-Aug-2009

Combine Subsections

> SEC Staff Guidance

> > Staff Accounting Bulletins

> > > SAB Topic 10.F, Presentation of Liabilities for Environmental Costs

S99-1 The following is the text of SAB Topic 10.F, Presentation of Liabilities for Environmental Costs.

Facts: A public utility company determines that it is obligated to pay material amounts as a result of an environmental liability. These amounts may relate to, for example, damages attributed to clean-up of hazardous wastes, reclamation costs, fines, and litigation costs.

Question 1: May a rate-regulated enterprise present on its balance sheet the amount of its estimated liability for environmental costs net of probable future revenue resulting from the inclusion of such costs in allowable costs for rate-making purposes?

Interpretive Response: No. Statement 71 [paragraph [980-340-25-1](#)] specifies the conditions under which rate actions of a regulator can provide reasonable assurance of the existence of an asset. The staff believes that environmental costs meeting the criteria of paragraph 9 FN6 of Statement 71 [paragraph [980-340-25-1](#)] should be presented on the balance sheet as an asset and should not be offset against the liability. Contingent recoveries through rates that do not meet the criteria of paragraph 9 [paragraph [980-340-25-1](#)] should not be recognized either as an asset or as a reduction of the probable liability.

FN6 Paragraph 9 of Statement 71 [paragraph 980-340-25-1] requires a rate-regulated enterprise to capitalize all or part of an incurred cost that would otherwise be charged to expense if it is probable that future revenue will be provided to recover the previously incurred cost from inclusion of the costs in allowable costs for rate-making purposes.

Question 2: May a rate-regulated enterprise delay recognition of a probable and estimable liability for environmental costs which it has incurred at the date of the latest balance sheet until the regulator's deliberations have proceeded to a point enabling management to determine whether this cost is likely to be included in allowable costs for rate-making purposes?

Interpretive Response: No. Statement 5 [paragraph 450-20-25-2] states that an estimated loss from a loss contingency shall be accrued by a charge to income if it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. FN7 The staff believes that actions of a regulator can affect whether an incurred cost is capitalized or expensed pursuant to Statement 71 [paragraph 980-340-25-1], but the regulator's actions cannot affect the timing of the recognition of the liability.

FN7 Registrants also should apply the guidance of SOP 96-1 [Section 410-30-25] in determining the appropriate recognition of environmental remediation costs.

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