
CHAPTER ONE

Financial Reports and the Financial Reporting Process

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1.1 INTRODUCTION

Environmental financial reporting deals with accounting for and reporting on environmental transactions, conditions, and events that affect, or are reasonably likely to affect, the financial position of an enterprise. Although there are circumstances in which an entity may hold an environmental asset, for the most part, environmental financial reporting is concerned with environmental liabilities and risks, as these are the factors of greatest concern to investors and other stakeholders. Typically, when environmental-related assets are reported, they are reported as offsets to corresponding environmental liabilities.

For purposes of this book, environmental financial reporting encompasses only those environmental matters covered by the existing financial reporting framework in the United States. Accordingly, this book addresses only those environmental transactions, conditions, and events that affect, or are reasonably likely to affect, the financial position of an enterprise. It does not address the recognition and measurement of costs that are external to the entity, such as the impact of air pollution and water pollution on the environment and society as a whole, and that are not currently absorbed by the entity (often referred to as *external costs* or *externalities*).

The boundaries between internal costs and external costs can and do shift over time. Environmental legislation, for example, may convert an external cost into an internal cost by imposing an obligation on an entity to undertake specific action for which there was previously no such obligation. For example, U.S. companies historically have not been required to internalize the costs associated

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with emission of carbon dioxide and other greenhouse gases into the atmosphere. Future legislation arising from concerns about global warming, however, may force companies to incur significant costs to reduce the level of greenhouse gas (GHG) emissions. Laws curtailing GHG emissions might also have an adverse effect on other industries, such as the automotive industry, which produce products that are sources of such emissions. The foreseeable transition from external costs to internal costs can be a primary element of environmental risk to the enterprise. Although generally accepted accounting principles (GAAP) are not designed to account for environmental risks of this type, the federal securities laws do require disclosure of known trends, events, or uncertainties that are reasonably likely to affect the entity's future financial condition.

Environmental accounting includes both financial accounting and management accounting. *Financial accounting* is a standardized means for compiling and communicating financial information, including environmental financial information, to external audiences. By contrast, *management accounting* is internally focused. Management accounting supplies information that helps managers achieve business objectives and evaluate performance of the enterprise, including financial performance and environmental performance. Environmental management accounting involves the identification and evaluation of environmental impacts, and the integration of those impacts into corporate decisions on product costing, product pricing, capital budgeting, product design, and performance evaluation. The focus of this book is environmental financial reporting to external audiences. This includes both the display of quantitative information in the financial statements and the disclosure of quantitative and nonquantitative information outside of the financial statements, as necessary to fairly present the financial condition and results of operations of the reporting entity.

The owners of the enterprise are the principal audience for environmental financial information. Stockholders rely on financial reporting to assess the current financial condition of the enterprise, the financial performance of the enterprise over time, and the future prospects of the enterprise. Current and prospective stockholders therefore have an interest in the relative transparency of an entity's material environmental costs, liabilities, and risks (including reputation risks) that could adversely affect the future financial condition and performance of the enterprise. An expanded list of secondary audiences for environmental financial information includes the entity's management and board of directors, employees, suppliers, consumers, competitors, financial institutions, insurers, government, interest groups, media, the scientific community, and the general public. This extended audience has a wide range of interests in environmental reporting of enterprise activities.

For example, creditors have a vested interest in complete and timely disclosure of environmental liabilities to assess credit risks and potential joint liability for loans secured by contaminated properties. Employees prefer to work for companies with reputations for environmental responsibility, and they expect safe and healthy working conditions. The general public may simply be interested in how environmental performance affects the quality of the environment or the country's economic growth.

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The leaders of an enterprise can use information about current and potential future environmental obligations to:

- Encourage defensive and prudent operations and waste reduction.
- Improve manufacturing, waste disposal, and shipping practices.
- Negotiate and settle disputes with insurance carriers.
- Influence regulators and public policy makers.
- Determine suitable levels of financial resources.
- Reassess corporate strategy and management practices.
- Articulate a comprehensive risk management program.
- Improve public citizenship.
- Assess hidden risks in takeovers and acquisitions.

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Financial statements, the notes to the financial statements, and nonfinancial statement disclosures (collectively, *financial reports*) (see §§ 4.2, 4.3, and 4.4, are the primary focus of financial reporting. The financial reports are the final output of a financial reporting process that involves identification, assessment, measurement, and reporting (financial statement display and financial statement and nonfinancial statement disclosures).

The dissemination of reliable environmental information within the financial reports is the purpose of environmental financial reporting. To be reliable, environmental financial information must be prepared and presented in accordance with widely accepted financial reporting standards. Standards provide a consistent and uniform basis on which to record and analyze the financial condition and performance of the enterprise and to compare the financial condition and performance of different companies within or across industries. Standards are intended to reduce the ambiguity of analysis and provide a separation of fact from opinion and unverified facts. It is a notable weakness of the environmental financial reporting framework in the United States that existing standards have largely failed to achieve these objectives.

Financial reporting standards have developed over long periods and have responded to changes in the nature of business enterprises, technology, legal standards, and stakeholder expectations. The expansion of environmental regulation (beginning in the late 1960s), increasing concerns about global environmental impacts on national economies and international trade, and heightened expectations for environmental transparency and sound environmental risk management by institutional investors now pose new challenges to the framework of environmental financial reporting standards.

Recently, stakeholders—including environmental protection groups, investors and analysts with an interest in the social responsibility of corporate enterprises, researchers, and others—have complained that existing environmental financial reporting standards allow too much flexibility and are too narrowly

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scoped to provide adequate disclosure of relevant information. These stakeholders maintain that the existing regulations give companies too much leeway in determining what environmental information to disclose and limit the extent of disclosure by defining environmental information narrowly. As a result, they believe, companies' disclosure of environmental information is inadequate, hindering investors' ability to assess companies' overall financial condition and the risks they face.

Identified areas of concern regarding perceived gaps in the financial reporting framework for environmental information in the U.S. and internationally include:

- *Expansion of reportable corporate obligations beyond purely legal obligations to include equitable obligations.* The expansion of corporate obligations beyond purely legal ones is particularly important to developing countries. Transnational corporations often account for, and report on, environmental liabilities arising from legal obligations in developed countries, but are silent regarding similar conditions in developing countries that do not have well developed environmental laws. The concept of equitable obligation has been put forth as a means of closing a perceived gap where companies are reporting only when they have no discretion not to report, such as in the case of a legal obligation.
- *Disclosure to shareholders of contamination on one's own property even though the company has no immediate legal obligation for cleanup.* Most U.S. environmental remediation laws, although they are stringent once contamination is discovered, do not require companies to search for historical pollution conditions on their own property. At issue is whether existing financial reporting standards require companies to disclose unasserted claims for conditional legal obligations associated with company-owned properties and facilities.
- *Gradual or immediate recognition of environmental retirement obligations for long-lived assets.* Environmental exit costs associated with the retirement of long-lived assets, such as nuclear power plants and hazardous waste landfills, can have a material effect on the future financial condition of an enterprise. The appropriate manner in which to account for such costs has been a subject of ongoing controversy and disagreement.
- *Measurement of environmental liabilities.* The inherent difficulty in measuring environmental liabilities means that estimates of environmental liabilities rarely represent a single predicted outcome. Various accounting approaches have been developed to address measurement of contingent liabilities in situations in which a single most-likely amount is not available. Controversy exists as to which of these methodologies best achieves the objectives of environmental financial reporting.
- *Assessment of materiality of environmental liabilities on an individual or aggregate basis.* Financial reporting standards do not explicitly require companies to aggregate the estimated costs of similar potential liabilities, such as multiple hazardous waste sites, when assessing materiality.

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Consequently, some entities assess the materiality of each environmental liability on an individual basis. Many stakeholders believe that disclosure should be made when an entity believes its environmental liability for an individual circumstance or its environmental liability in the aggregate is material. Also, U.S. Securities and Exchange Commission (SEC) regulations do not require companies to disclose quantitative information on the total number of environmental remediation sites, related claims, or the associated liabilities. As a result, some investors contend that they cannot determine whether companies have enough reserves to cover current and future liabilities.

- *Reporting of environmental assets and nonfinancial environmental performance data.* Existing financial reporting standards do not require companies to disclose information about their environmental assets or environmental performance. A growing body of socially responsible investors believes that such information could be material to many investors or indicative of effective corporate management.

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As discussed in Chapter 5, the entity's environmental financial reporting objectives relate principally to the accuracy, completeness, and relevance of the environmental financial information contained in its financial reports. Ultimately, if the entity's financial reports fail to conform with GAAP or fail to fairly present the financial condition of the company, the entity's financial reporting objectives will not be met.

To have any assurance that the entity's financial reporting objectives will be achieved, management must design, implement, and maintain an appropriate financial reporting process. Of course, the establishment of environmental financial reporting objectives and an associated financial reporting process is not warranted for all companies, given the nature of their assets and operations. The threshold criteria for determining whether circumstances warrant the development of objectives and the design and implementation of an environmental financial reporting process are discussed in Chapter 8.

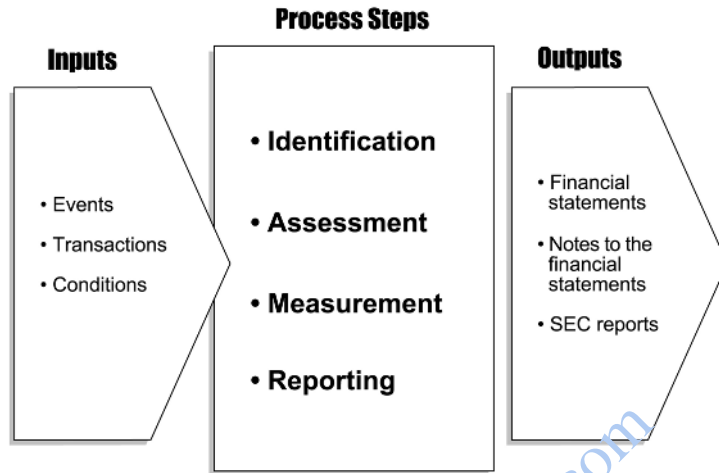
GAAP and SEC disclosure rules assume that the entity has identified those aspects of its business that are subject to financial reporting and collected the information necessary to prepare the financial statements and related disclosures. For example, FASB Statement of Financial Accounting Standards No. 5, "Accounting for Contingencies" (FAS 5) (see Chapter 19) requires the accrual of a liability for environmental loss contingencies meeting certain criteria, but does not require the reporting entity to identify its environmental loss contingencies in the first place. Nor does FAS 5 specify how the entity is to collect the information needed to determine whether the criteria for accrual are met. Rather, FAS 5 assumes that the entity has already identified and assessed the environmental loss contingencies that might be reportable.

As depicted in Exhibit 1.1, the environmental financial reporting process comprises four major sets of activities: identification, assessment, measurement,

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EXHIBIT 1.1

Environmental Financial Reporting Process



and reporting (financial statement display and financial statement and nonfinancial statement disclosures).

(a) IDENTIFICATION

Identification involves activities designed to discover and monitor transactions, events, and conditions that have caused or could give rise to material environmental costs, liabilities, or risks. The process of identifying environmental costs, liabilities, and risks in the context of corporate mergers, asset acquisitions, and financing transactions is commonly called *environmental due diligence*. The process of identifying environmental costs, liabilities, and risks affecting one's own company, often focused primarily on assessment of compliance with environmental laws, is commonly called *environmental auditing*. The identification phase of the environmental financial reporting process involves both environmental due diligence and environmental auditing (in the broader sense of identifying all significant environmental costs, liabilities, and risks).

An in-depth examination of environmental due diligence and environmental auditing is beyond the scope of this book. Depending on the type of environmental conditions of concern, there are several well-established standards that companies can employ to provide reasonable assurance that environmental liabilities and risks are identified in a timely manner. These standards include, but are not limited to:

- ASTM E 2107, "Standard Practice for Environmental Regulatory Compliance Audits." This standard, issued by ASTM International, identifies the minimum requirements for environmental regulatory compliance audits. It also provides information on the terms and procedures associated with audits as practiced in the United States and serves as a source to which

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interested parties may refer for definitions and descriptions of accepted audit terms and procedures.

- *ASTM E 1528, "Standard Practice for Environmental Site Assessments: Transaction Screen Process (Transaction Screen)."* The transaction screen is a preliminary inquiry as to the environmental condition of a parcel of commercial real estate; it is intended to provide a reasonable basis to determine whether further inquiry is warranted. ASTM E 1528 is often used with respect to commercial properties that are initially considered to be uncontaminated. If the entity finds that further inquiry is necessary, ASTM E 1527 may be used.
- *ASTM E 1527, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process."* The purpose of this standard is to define good commercial and customary practice in the United States for conducting an environmental site assessment of a parcel of real estate with respect to petroleum products and the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (see § 3.2(a)(i)). ASTM E 1527 is commonly used in connection with environmental due diligence for sales and financing transactions involving commercial or industrial real estate. Information gathered during these preceding assessments sometimes forms the basis for postclosing disclosure of environmental financial information by the acquiring company. The standard is less often used to identify environmental conditions affecting company-owned real estate for purposes of financial reporting. Items that are considered outside the scope of this standard and which may require additional investigation procedures include asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high-voltage power lines.
- *ASTM E 2247, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland and Rural Property."* This standard is intended for environmental site assessments conducted on 120 acres or more of forestland or rural property or with a developed use of only managed forestland or agriculture. The standard includes an optional checklist for threatened and endangered species consideration and nonpoint source pollution evaluations.
- *ASTM E 2356, "Standard Practice for Comprehensive Building Asbestos Surveys."* This standard describes procedures for conducting comprehensive surveys of buildings and facilities for the purpose of locating, identifying, quantifying, and assessing asbestos-containing materials.
- *ISO 14015, "Environmental Assessments of Sites and Organizations."* The purpose of the ISO 14000 series of environmental management system standards, issued by the International Standards Organization (ISO), is to provide organizations with the bases of an effective system of

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environmental management for reaching their environmental and economic objectives. A central component of an ISO 14000 environmental management system is the requirement to establish and maintain a procedure to identify the environmental aspects of the organization's activities, products, or services that it can control and over which it can be expected to have an influence, in order to determine those that have or can have significant impacts on the environment.

(b) ASSESSMENT

Assessment involves activities designed to enable the measurement and reporting of environmental-related transactions, events, and conditions. Evaluation of pollution conditions often involves highly specialized environmental science and engineering services. Evaluation of pollution conditions for financial reporting purposes may involve many of the same activities required to develop appropriate corrective action plans to remove or control environmental contamination.

Entities may be obligated under environmental laws to assess identified pollution conditions. The Superfund law (see § 3.2(a)) and the remediation provisions in RCRA (see § 3.2(b)), for example, contain specific requirements for assessment of identified pollution conditions. In addition, there are various non-governmental standards pertaining to assessment of pollution conditions, including:

- *ASTM E 1903, "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process."* A Phase II environmental site assessment typically follows a Phase I environmental site assessment that identified known or suspected pollution conditions. A Phase II environmental site assessment is a more detailed investigation requiring sampling and analysis of environmental media (e.g., soil, groundwater, surface water, and sediment). The purpose of the Phase II investigation is to estimate the nature and extent of contamination and to provide the basis for a preliminary assessment of the cost for corrective or preventive action.
- *ASTM Phase II Environmental Site Assessment Implementation Standards.* ASTM has issued more than 20 guides, practices, and test methods addressing various elements of the Phase II environmental site assessment process, including conceptualizing subsurface and contaminant conditions to adequately focus subsurface investigations, selecting and using drilling and soil sampling techniques, classifying and describing soils, designing and installing groundwater monitoring wells, sampling and monitoring groundwater, and soil gas monitoring.

(c) MEASUREMENT

Measurement involves activities designed to quantify the financial impact of environmental-related transactions, events, and conditions. Measurement of environmental liabilities, in particular, is a complex undertaking and involves many

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subjective judgments. Also, the techniques used to measure these items vary depending on the nature of the underlying circumstances. The primary methodologies and related standards for measurement of environmental liabilities include:

- *Fair value measurement.* Fair value measurement is required by several financial accounting pronouncements applicable to environmental obligations associated with environmental guarantees (see § 21.3), asset retirement obligations (see § 22.3), and asset impairments (see § 23.3). The fair value of a liability is the amount at which the liability could be settled in a current transaction between willing parties (other than in a forced or liquidation transaction). Guidance from the Financial Accounting Standards Board (FASB) states that market prices quoted in active markets are the best evidence of fair value and should be used, if available. If quoted market prices are not available, fair value should be estimated based on the best information available in the circumstances, including prices for similar liabilities and the results of expected present value (or other valuation) techniques. The fair value of an environmental liability will typically be measured by estimating the price that the entity would have to pay a third party (e.g., an insurance company) having a comparable credit rating to assume the liability.
- *Expected present value.* Statement of Financial Accounting Concepts No. 7, "Using Cash Flow Information and Present Value in Accounting Measurements" (SFAC 7) provides guidance on the application of expected present value measurement. This robust measurement approach is also favored by ASTM E 2137, "Standard Guide for Estimating Monetary Costs and Liabilities for Environmental Matters." ASTM E 2137 is a voluntary guide for estimating costs and liabilities for environmental matters in the United States (see § 25.2). In summary, the measurement approach involves calculation of the net present value of estimated future cash flows that reflect, to the extent possible, a marketplace assessment of the cost and timing of performing the activities required to settle an obligation.

The expected present value approach allows use of present value (discounting) techniques when the timing of cash flows is uncertain, by developing a probabilistic weighted average of various possible future scenarios. Like any accounting measurement, however, the application of an expected present value approach is subject to a cost-benefit constraint. In some cases, an entity may have access to considerable data and may be able to develop many cash-flow scenarios. In other cases, the entity may not be able to develop more than general statements about the variability of cash flows without incurring considerable cost. The accounting challenge is to balance the cost of obtaining additional information against the additional reliability that information will bring to the measurement.

- *Best estimate.* Under FAS 5, recognized liabilities for environmental loss contingencies should be measured based on the reporting entity's best estimate of the liability (see §§ 19.3 and 20.3). FAS 5 does not prescribe the use of a specific measurement methodology.

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- *Most likely value.* The most likely value is the estimated cost of the scenario believed to be most likely to occur (e.g., a stated preferred remedy).
- *Known minimum value.* With respect to measurement of recognized contingent liabilities under FAS 5, FASB guidance states that when no amount within a range of possible outcomes is a better estimate than any other amount, the minimum amount in the range should be used.
- *ASTM framework.* ASTM E 2137, "Standard Guide for Estimating Monetary Costs and Liabilities for Environmental Matters," is a guide for estimating costs and liabilities for environmental matters (see § 25.2). The central component of ASTM E 2137 is a decision framework for estimating environmental costs and liabilities that guides an entity in choosing among various alternative measurement techniques.

(d) REPORTING

Reporting involves activities designed to ensure that the quantitative and non-quantitative information required to be disclosed in an entity's financial statements and SEC reports is recorded, processed, summarized, and reported within the appropriate time periods. Such activities include procedures designed to ensure that the information required to be disclosed is accumulated and communicated to the entity's senior management, to allow timely decisions regarding required disclosure. The final stage of the reporting process is the presentation of environmental financial information in the entity's financial statements and SEC reports. The standards governing environmental financial reporting are set forth in Part Three of this book.

Display of quantitative environmental information in the financial statements is prescribed by GAAP and requires limited subjective judgment. By contrast, disclosure of financial and nonfinancial information in the notes to the financial statements and in SEC reports often requires significant judgment and careful drafting to properly apply highly subjective criteria. Reporting also involves activities designed to update reported environmental financial information to reflect changes in circumstances and assumptions. Environmental financial reporting typically concerns inchoate transactions, events, or conditions as to which the ultimate financial impact to the enterprise will not be known for many years into the future. As circumstances and assumptions change over time, previously reported information must be updated.

(e) SPECIAL CONSIDERATIONS

These four phases of the environmental financial reporting process—identification, assessment, measurement, and reporting—are generically applicable to a broad range of accounting estimates. However, their application to environmental matters requires special consideration due to the unique characteristics of environmental liabilities and risks. In general, the financial impact on the enterprise of environmental transactions, events, and conditions is not obvious and apparent. Environmental problems are often difficult to identify, evaluate, and measure. There are often long delays between the occurrence of the underlying

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obligating event and the ultimate financial impact on the organization. Moreover, as noted in Chapter 5, reporting entities are often faced with competing objectives that may motivate management to seek something less than full environmental transparency.

For these reasons, limited aspects of environmental financial reporting (e.g., environmental information reported in the company's financial statements) cannot be evaluated in isolation from the overall environmental financial reporting process. Familiarity with financial reporting standards alone is insufficient. Although these standards dictate procedures for measuring and reporting environmental liabilities and risks, they provide little or no instruction on the procedures for identifying and assessing the underlying environmental-related transactions, events, and conditions in the first place.

(f) RELATION TO OTHER ENVIRONMENTAL BUSINESS PROCESSES

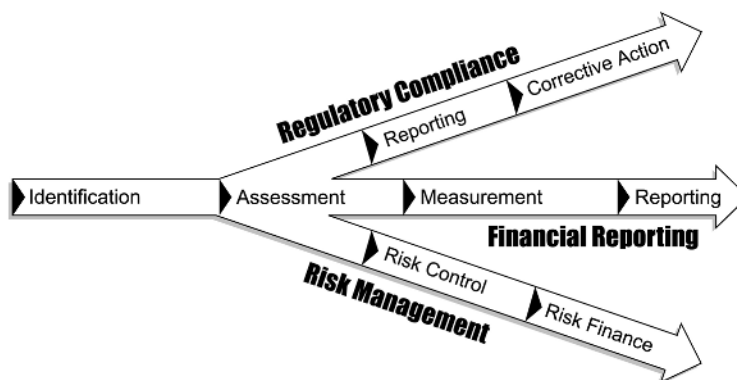
The environmental financial reporting process has certain elements—identification and assessment—in common with environmental business processes more familiar to environmental managers, lawyers, and consultants (e.g., environmental compliance management and environmental risk management). However, as shown in Exhibit 1.2, there are also significant differences.

Environmental compliance management comprises an entity's efforts to ensure compliance with applicable environmental laws. Environmental compliance management generally focuses primarily on pollution control laws, as these laws typically affect day-to-day business operations. By contrast, pollution remediation laws do not affect routine operations and tend to impose fewer compliance obligations. Environmental compliance management typically involves the following process activities:

- Identification of instances of possible noncompliance with environmental laws.

EXHIBIT 1.2

Environmental Management Processes



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- Assessment of relevant factual and legal circumstances to confirm that a violation has occurred and, if so, to determine the consequences of the violation.
- Reporting of violations to environmental regulatory authorities (if required by law or voluntarily elected by management).
- Selection and implementation of corrective action measures to achieve and maintain compliance.

Environmental risk management comprises an entity's efforts to cost-effectively manage its environmental loss exposures. As used in this book, *environmental risk* concerns the potential for adverse financial impacts to the organization arising from environmental losses, as opposed to the degree of actual or potential risk to human health and the environment (although the latter may have an influence on the former). Environmental risk management typically involves the following process activities:

- Identification of environmental loss exposures.
- Assessment of the probability of occurrence and the magnitude of the potential loss to the enterprise.
- Selection and implementation of measures to control identified risks.
- Selection and implementation of mechanisms to finance risks that cannot be avoided or eliminated (e.g., insurance, reserves, indemnification agreements, and so forth).

Environmental managers, lawyers, and consultants generally are experienced in the areas of identification and assessment, but have only limited experience and background with respect to measurement and reporting. Conversely, financial statement preparers and independent auditors generally are experienced in the areas of measurement and reporting, but have little, if any, expertise in the areas of identification and assessment. This lack of expertise presents a significant challenge to financial statement preparers and independent auditors in assuring the reliability of reported environmental financial information.

1.4 PROCESS CONTROL

GAAP and SEC disclosure rules, by themselves, do nothing to prevent the entity from:

- Failing to identify transactions, conditions, or events that have caused or could give rise to material environmental liabilities or risks.
- Failing to evaluate the nature and extent of known or reasonably suspected environmental conditions or events to determine whether such matters are reportable.
- Failing to collect the information and perform the procedures necessary to properly estimate the liability associated with reportable environmental conditions or events.

1.4 PROCESS CONTROL

- Failing to properly and consistently apply appropriate accounting policies to reportable environmental transactions, events, or conditions.
- Failing to periodically reevaluate and update previously reported environmental financial information.

Such failures may occur as the result of intentional or unintentional errors and omissions at various levels within the organization. Given the inherent complexity of environmental financial reporting, to have any assurance that such failures will not occur, management first must develop clearly understood financial reporting objectives, and thereafter implement and maintain a financial reporting process designed to achieve those objectives. Environmental financial reporting is a goal-driven exercise. In the absence of clearly understood objectives and a well-defined financial reporting process, organizations stand little chance of achieving acceptable standards of performance.

U.S. companies, even in the same industry, vary significantly in what they choose to report in their SEC filings and how they report it. This undesirable result led members of Congress to request a U.S. Governmental Accountability Office (GAO) study of perceived problems with environmental reporting. The GAO study concluded in 2004, with a report to Congress entitled *Environmental Disclosure: SEC Should Explore Ways to Improve Tracking and Transparency of Information*. One of the GAO's most significant findings was that "one cannot determine whether a low level of disclosure means that a company does not have existing or potential environmental liabilities, has determined that such liabilities are not material, or is not adequately complying with disclosure requirements." Though this is undoubtedly due in part to the flexibility in applicable financial reporting standards, the GAO's finding also highlights a larger problem: a general lack of confidence in the environmental reporting objectives of U.S. companies and the integrity of the financial reporting processes maintained to achieve these objectives.

Even with clearly understood objectives and a well-defined financial reporting process, there are many risks that may prevent the organization from achieving its objectives. For these reasons, the financial reporting process must: (1) operate within an organizational environment that is dedicated to ethical behavior and compliance with legal requirements and financial reporting standards, and (2) incorporate appropriate controls to effectively prevent and detect intentional and unintentional process deviations. These elements form the foundation of an effective internal control system intended to provide stakeholders with reasonable assurance that the entity's financial reporting objectives will be achieved.

Generally accepted accounting principles and SEC disclosure regulations set forth specifications and guidelines for the output of the financial reporting process—the financial statements, notes to the financial statements, and nonfinancial statement disclosures. These financial reporting standards provide little guidance for designing and implementing an effective environmental reporting process.

Guidance on process control is provided in the internal control provisions of generally accepted auditing standards (GAAS) and the federal securities laws

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and related SEC and Public Company Accounting Oversight Board (PCAOB) rules. In addition, several nongovernmental standards for internal control—most notably, the COSO Internal Control: Integrated Framework (see § 8.2)—set forth specifications and guidelines for establishing appropriate controls over the financial reporting process. These guidelines, however, do not specifically address environmental reporting. Each organization, therefore, must apply the general principles of internal control to the specific objectives and risks associated with environmental financial reporting.

1.5 ADDITIONAL CONSIDERATIONS FOR PUBLIC COMPANIES

A centerpiece of the Sarbanes-Oxley Act of 2002¹ (Sarbanes-Oxley or the Act) covered in Part Two is the heightened focus on *process* versus *output*. It is often stated that Sarbanes-Oxley does nothing to change the financial reporting standards applicable to environmental costs, liabilities, and risks. With only limited exceptions, this is an accurate characterization of the law. Sarbanes-Oxley, however, has dramatically increased management's accountability for the integrity of the financial reporting process. Sarbanes-Oxley can be expected to greatly increase the rigor applied by public companies to the design and implementation of effective environmental financial reporting processes. This in turn is likely to improve the accuracy and completeness of environmental financial reporting and thereby increase investor confidence in the environmental financial information reported by U.S. public companies.

The SEC and the PCAOB, established by Sarbanes-Oxley, have issued guidance relevant to the scope of internal control as it pertains to environmental financial reporting. This guidance, which is further discussed in § 8.3, expands the scope of the internal control requirements under the federal securities laws to encompass the full breadth of the financial reporting process described in § 1.3. According to PCAOB guidance, *internal control over financial reporting encompasses controls over the identification, measurement, and reporting of all material actual loss events which have occurred, including controls over the monitoring and risk assessment of areas in which, given the nature of the company's operations, such actual loss events are reasonably possible.*²

As illustrated in Exhibit 1.3, the implications of the PCAOB's guidance are significant. The PCAOB has in effect determined that environmental operations that are not directly related to financial reporting (e.g., activities to identify and assess environmental transactions, conditions, and events for purposes of maintaining compliance with environmental laws or controlling environmental risks) may be subject to the federal securities laws, if such operations are relevant to fair presentation of the company's financial position. Public companies with more than a remote exposure to material environmental liabilities now must pay special attention to the design and effective operation of environmental financial

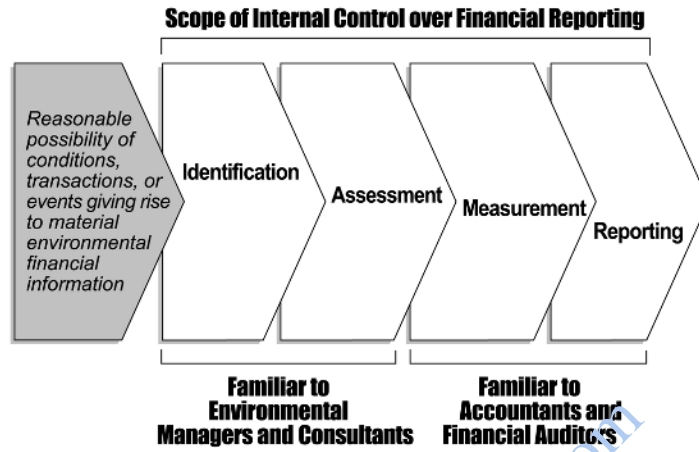
¹ H.R. 3763, Pub. L. No.107-204, 116 Stat. 745 (2002).

² See PCAOB, *Staff Questions and Answers: Auditing Internal Control over Financial Reporting*, Question 27 (Oct. 6, 2004) (emphasis added).

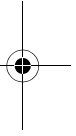
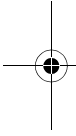
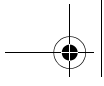
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EXHIBIT 1.3

Scope of Internal Control over the Financial Reporting Process



reporting processes and controls capable of achieving the rigorous standards imposed by Sarbanes-Oxley. Significant challenges lie ahead for the accounting and environmental professionals who together will be responsible for designing, implementing, and auditing these systems.



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