



SUSTAINABILITY ACCOUNTING STANDARD
NON-RENEWABLE RESOURCES SECTOR

OIL & GAS - REFINING & MARKETING

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #NR0103

Prepared by the
Sustainability Accounting Standards Board®

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Provisional Standard

OIL & GAS - REFINING AND MARKETING

Sustainability Accounting Standard

About SASB

The Sustainability Accounting Standards Board (SASB) provides sustainability accounting standards for use by publicly-listed corporations in the U.S. in disclosing material sustainability information for the benefit of investors and the public. SASB standards are designed for disclosure in mandatory filings to the Securities and Exchange Commission (SEC), such as the Form 10-K and 20-F. SASB is an independent 501(c)3 non-profit organization. Through 2016, SASB is developing standards for more than 80 industries in 10 sectors.

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INTRODUCTION

Purpose & Structure

This document contains the SASB Sustainability Accounting Standard (SASB Standard) for Oil & Gas - Refining & Marketing.

SASB Standards are comprised of **(1) disclosure guidance and (2) accounting standards on sustainability topics** for use by U.S. and foreign public companies in their annual filings (Form 10-K or 20-F) with the U.S. Securities and Exchange Commission (SEC). To the extent relevant, SASB Standards may also be applicable to other periodic mandatory filings with the SEC, such as the Form 10-Q, Form S-1, and Form 8-K.

SASB's disclosure guidance identifies sustainability topics at an industry level, which may be material— depending on a company's specific operating context— to a company within that industry.

Each company is ultimately responsible for determining which information is material and is therefore required to be included in its Form 10-K or 20-F and other periodic SEC filings.

SASB's accounting standards provide companies with standardized accounting metrics to account for performance on industry-level sustainability topics. When making disclosure on sustainability topics, companies adopting SASB's accounting standards will help to ensure that disclosure is standardized and therefore useful, relevant, comparable and auditable.

Industry Description

Oil & Gas - Refining & Marketing (R&M) companies refine petroleum products, market oil and gas products, and/or operate gas stations and convenience stores, all of which comprise the downstream operations of the oil and gas value chain. The types of refinery products and crude oil inputs influence the complexity of the refining process used, with different expenditure needs and intensity of environmental and social impacts. Most of the companies listed on U.S. exchanges that are primarily involved in oil and gas refining and marketing activities are domiciled in the U.S.

Note: The standards discussed below are for “pure-play” R&M activities, or independent R&M companies. Integrated oil and gas companies conduct upstream operations and are also involved in the distribution and/or refining or marketing of products. SASB has separate standards for the Oil and Gas Exploration & Production (NR-0101), and Midstream (NR-0102) industries. As such, integrated companies should also consider the disclosure topics and metrics from these standards.

Guidance for Disclosure of Material Sustainability Topics in SEC Filings

1. Industry-Level Material Sustainability Topics

For the Oil & Gas - Refining & Marketing Industry, SASB has identified the following material sustainability topics

- **Greenhouse Gas Emissions**
- **Air Quality**
- **Water Management**
- **Hazardous Materials Management**
- **Health, Safety, and Emergency Management**
- **Product Specifications & Clean Fuel Blends**
- **Pricing Integrity & Transparency**
- **Management of the Legal & Regulatory Environment**

2. Company-Level Determination and Disclosure of Material Sustainability Topics

Sustainability disclosures are governed by the same laws and regulations that govern disclosures by securities issuers generally. According to the U.S. Supreme Court, a fact is material if, in the event such fact is omitted from a particular disclosure, there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of the information made available.”^{1,2}

SASB has attempted to identify those sustainability topics that it believes may be material for all companies within each SICS industry. SASB recognizes, however, that each company is ultimately responsible for determining what is material to it.

Regulation S-K, which sets forth certain disclosure requirements associated with Form 10-K and other SEC filings, requires companies, among other things, to describe in the Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) section of Form 10-K “any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations. If the registrant knows of events that will cause a material change in the relationship between costs and revenues (such as known future increases in costs of labor or materials or price increases or inventory adjustments), the change in the relationship shall be disclosed.”²

Furthermore, Instructions to Item 303 state that the MD&A “shall focus specifically on material events and uncertainties known to management that would cause reported financial information not to be necessarily indicative of future operating results or of future financial condition.”²

In determining whether a trend or uncertainty should be disclosed, the SEC has stated that management should use a two-part assessment based on probability and magnitude:

¹ TSC Industries v. Northway, Inc., 426 U.S. 438 (1976).

² C.F.R. 229.303(Item 303)(a)(3)(ii).

- First, a company is not required to make disclosure about a known trend or uncertainty if its management determines that such trend or uncertainty is not reasonably likely to occur.
- If a company's management cannot make a reasonable determination of the likelihood of an event or uncertainty, then disclosure is required unless management determines that a material effect on the registrant's financial condition or results of operation is not reasonably likely to occur.

3. Sustainability Accounting Standard Disclosures in Form 10-K

a . Management's Discussion and Analysis

Companies should consider making disclosure on sustainability topics as a complete set in the MD&A, in a sub-section titled **"Sustainability Accounting Standards Disclosures."**³

b . Other Relevant Sections of Form 10-K

In addition to the MD&A section, companies should consider disclosing sustainability information in other sections of Form 10-K, as relevant, including:

- **Description of business**—Item 101 of Regulation S-K requires a company to provide a description of its business and its subsidiaries. Specifically Item 101(c)(1)(xii) expressly requires disclosure regarding certain costs of complying with environmental laws:

Appropriate disclosure also shall be made as to the material effects that compliance with Federal, State and local provisions which have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, may have upon the capital expenditures, earnings and competitive position of the registrant and its subsidiaries.

- **Legal proceedings**—Item 103 of Regulation S-K requires companies to describe briefly any material pending or contemplated legal proceedings. Instructions to Item 103 provide specific disclosure requirements for administrative or judicial proceedings arising from laws and regulations targeting discharge of materials into the environment or primarily for the purpose of protecting the environment.
- **Risk factors**—Item 503(c) of Regulation S-K requires filing companies to provide a discussion of the most significant factors that make an investment in the registrant speculative or risky, clearly stating the risk and specifying how a particular risk affects the particular filing company

c . Rule 12b-20

Securities Act Rule 408 and Exchange Act Rule 12b-20 require a registrant to disclose, in addition to the information expressly required by law or regulation, "such further material information, if any, as may be necessary to make the required statements, in light of the circumstances under which they are made, not misleading."

More detailed guidance on disclosure of material sustainability topics can be found in the **SASB Conceptual Framework**, available for download via <http://www.sasb.org/approach/conceptualframework/>.

³ SEC [Release Nos. 33-8056; 34-45321; FR-61] [Commission Statement about Management's Discussion and Analysis of Financial Condition and Results of Operations](#): "We also want to remind registrants that disclosure must be both useful and understandable. That is, management should provide the most relevant information and provide it using language and formats that investors can be expected to understand. Registrants should be aware also that investors will often find information relating to a particular matter more meaningful if it is disclosed in a single location, rather than presented in a fragmented manner throughout the filing."

Guidance on Accounting of Material Sustainability Topics

For material sustainability topics in the Oil & Gas - Refining & Marketing Industry, SASB identifies accounting metrics.

SASB recommends that each company consider using these sustainability accounting metrics when disclosing its performance with respect to each of the sustainability topics it has identified as material.

As appropriate—and consistent with Rule 12b-20⁴—for each sustainability topic, companies should consider including a narrative description of any material factors necessary to ensure completeness, accuracy and comparability of the data reported. Where not addressed by the specific accounting metrics, but relevant, the registrant should discuss the following related to the topic:

- the registrant's **strategic approach** to managing performance on material sustainability issues;
- the registrant's **competitive positioning**;
- the **degree of control** the registrant has;
- any **measures the registrant has undertaken** or **plans to undertake** to improve performance; and
- data for registrant's **last three completed fiscal years** (when available).

SASB recommends that registrants use SASB Standards specific to their primary industry as identified in the [Sustainable Industry Classification System \(SICSTM\)](#). If a registrant generates significant revenue from multiple industries, SASB recommends that it consider the materiality of the sustainability issues that SASB has identified for those industries and disclose the associated SASB accounting metrics

Users of the SASB Standards

The SASB Standards are intended for companies that engage in public offerings of securities registered under the Securities Act of 1933 (the Securities Act) and those that issue securities registered under the Securities Exchange Act of 1934 (the Exchange Act),⁵ for use in SEC filings, including, without limitation, annual reports on Form 10-K (Form 20-F for foreign issuers), quarterly reports on Form 10-Q, current reports on Form 8-K, and registration statements on Forms S-1 and S-3. Nevertheless, disclosure with respect to the SASB Standards is not required or endorsed by the SEC or other entities governing financial reporting, such as FASB, GASB, or IASB

⁴SEC Rule 12b-20: "In addition to the information expressly required to be included in a statement or report, there shall be added such further material information, if any, as may be necessary to make the required statements, in the light of the circumstances under which they are made not misleading."

⁵Registration under the Securities Exchange Act of 1934 is required (1) for securities to be listed on a national securities exchange such as the New York Stock Exchange, the NYSE Amex and the NASDAQ Stock Market or (2) if (A) the securities are equity securities and are held by more than 2,000 persons (or 500 persons who are not accredited investors) and (B) the company has more than \$10 million in assets.

Scope of Disclosure

Unless otherwise specified, SASB recommends:

- That a registrant disclose on sustainability issues and metrics for itself and for entities in which the registrant has a controlling interest and therefore are consolidated for financial reporting purposes (controlling interest is generally defined as ownership of 50% or more of voting shares)⁶
- That for consolidated entities, disclosures be made, and accounting metrics calculated, for the whole entity, regardless of the size of the minority interest; and
- That information from unconsolidated entities not be included in the computation of SASB accounting metrics. A registrant should disclose, however, information about unconsolidated entities to the extent that such registrant considers the information necessary for investors to understand its performance with respect to sustainability issues (typically this disclosure would be limited to risks and opportunities associated with these entities).

Reporting Format

Activity Metrics and Normalization

SASB recognizes that normalizing accounting metrics is important for the analysis of SASB disclosures.

SASB recommends that a registrant disclose any basic business data that may assist in the accurate evaluation and comparability of disclosure, to the extent that they are not already disclosed in the Form 10-K (e.g., revenue, EBITDA, etc.).

Such data – termed “activity metrics” – may include high-level business data such as total number of employees, quantity of products produced or services provided, number of facilities, or number of customers. It may also include industry-specific data such as plant capacity utilization (e.g., for specialty chemical companies), number of transactions (e.g., for internet media and services companies), hospital bed days (e.g., for health care delivery companies), or proven and probable reserves (e.g., for oil and gas exploration and production companies).

Activity metrics disclosed should:

- Convey contextual information that would not otherwise be apparent from SASB accounting metrics.
- Be deemed generally useful for users of SASB accounting metrics (e.g., investors) in performing their own calculations and creating their own ratios.
- Be explained and consistently disclosed from period to period to the extent they continue to be relevant – however, a decision to make a voluntary disclosure in one period does not obligate a continuation of that disclosure if it is no longer relevant or if a better metric becomes available.

⁶See US GAAP consolidation rules (Section 810).

Where relevant, SASB recommends specific activity metrics that – at a minimum – should accompany SASB accounting metric disclosures.

METRIC	CATEGORY	UNIT OF MEASURE	CODE
Refining throughput of crude oil and other feedstocks ⁷	Quantitative	Barrels of oil equivalent (BOE)	NR0103-A
Refining operating capacity ⁸	Quantitative	Million barrels per calendar day (MBPD)	NR0103-B
Solomon-UEDC ^{TM9}	Quantitative	Number	NR0103-C

Units of Measure

Unless specified, disclosures should be reported in International System of Units (SI units).

Uncertainty

SASB recognizes that there may be inherent uncertainty when disclosing certain sustainability data and information. This may be related to variables like the imperfectness of third-party reporting systems or the unpredictable nature of climate events. Where uncertainty around a particular disclosure exists, SASB recommends that the registrant should consider discussing its nature and likelihood.

Estimates

SASB recognizes that scientifically-based estimates, such as the reliance on certain conversion factors or the exclusion of de minimis values, may be necessary for certain quantitative disclosures. Where appropriate, SASB does not discourage the use of such estimates. When using an estimate for a particular disclosure, SASB expects that the registrant discuss its nature and substantiate its basis.

Timing

Unless otherwise specified, disclosure shall be for the registrant's fiscal year.

⁷ Note to **NR0103-A** – The total volume of crude oil and other feedstocks processed in the refinery system during the fiscal year.

⁸ Note to **NR0103-B** – Per the U.S. Energy Information Administration, operating (or operable) capacity is: the amount of capacity that, at the beginning of the period, is in operation; not in operation and not under active repair, but capable of being placed in operation within 30 days; or not in operation but under active repair that can be completed within 90 days. Operable capacity is the sum of the operating and idle capacity and is measured in barrels per calendar day.

⁹ Note to **NR0103-C** – Utilized Equivalent Distillation Capacity, a proprietary metric of Solomon Associates, is a complexity-weighted normalization parameter reflective of the operating cost intensity of a refinery based on size and configuration of its particular mix of process and non-process facilities. According to Solomon Associates, it offers significant improvement in assessing performance over use of a simple barrel-of-input normalization approach.

Limitations

There is no guarantee that SASB Standards address all sustainability impacts or opportunities associated with a sector, industry, or company and, therefore, a company must determine for itself the topics—sustainability-related or otherwise—that warrant discussion in its SEC filings. Disclosure under SASB Standards is voluntary. It is not intended to replace any legal or regulatory requirements that may be applicable to user operations. Where such laws or regulations address legal or regulatory topics, disclosure under SASB Standards is not meant to supersede those requirements. Disclosure according to SASB Standards shall not be construed as demonstration of compliance with any law, regulation, or other requirement.

SASB Standards are intended to be aligned with the principles of materiality enforced by the SEC. However, SASB is not affiliated with or endorsed by the SEC or other entities governing financial reporting, such as FASB, GASB, or IASB.

Forward Looking Statements

Disclosures on sustainability topics can involve discussion of future trends and uncertainties related to the registrant's operations and financial condition, including those influenced by external variables (e.g., environmental, social, regulatory and political). Companies making such disclosures should familiarize themselves with the safe harbor provisions of Section 27A of the Securities Act and Section 21E of the Exchange Act, which preclude civil liability for material misstatements or omissions in such statements if the registrant takes certain steps, including, among other things, identifying the disclosure as forward looking and accompanying such disclosure with "meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the forward-looking statements."

Assurance

In disclosing to SASB Standards, it is expected that registrants disclose with the same level of rigor, accuracy, and responsibility as all other information contained in their SEC filings.

SASB encourages registrants to use independent assurance (attestation), for example, an Examination Engagement to AT Section 101.

Table 1. Material Sustainability Topics & Accounting Metrics

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under a regulatory program	Quantitative	Metric tons CO ₂ -e, Percentage (%)	NR0103-01
	Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	NR0103-02
Air Quality	Air emissions for the following pollutants: NO _x (excluding N ₂ O), SO _x , particulate matter (PM), H ₂ S, and volatile organic compounds (VOCs)	Quantitative	Metric tons (t)	NR0103-03
	Number of refineries in or near areas of dense population	Quantitative	Number	NR0103-04
Water Management	Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress	Quantitative	Cubic meters (m ³), Percentage (%)	NR0103-05
	Number of incidents of non-compliance with water quality permits, standards, and regulations	Quantitative	Number	NR0103-06
Hazardous Materials Management	Amount of hazardous waste from operations, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	NR0103-07
	Number of underground storage tanks (USTs), number of UST releases requiring cleanup, percentage in states with UST financial assurance funds	Quantitative	Number, Percentage (%)	NR0103-08
Health, Safety, and Emergency Management	(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees	Quantitative	Rate	NR0103-09
	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	Quantitative	Rate	NR0103-10
	Challenges to Safety Systems indicator rate (Tier 3)	Quantitative	Rate	NR0103-11
	Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators	Discussion and Analysis	n/a	NR0103-12
Product Specifications & Clean Fuel Blends	Percentage of Renewable Volume Obligation (RVO) met through: (1) Production of renewable fuels, (2) Purchase of "separated" renewable identification numbers (RIN)	Quantitative	Percentage (%)	NR0103-13
	Total addressable market and share of market for advanced biofuels and associated infrastructure	Quantitative	U.S. Dollars (\$), Percentage (%)	NR0103-14
Pricing Integrity & Transparency	Amount of legal and regulatory fines and settlements associated with price fixing or price manipulation ¹⁰	Quantitative	U.S. Dollars (\$)	NR0103-15
Management of the Legal & Regulatory Environment	Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations	Quantitative	U.S. Dollars (\$)	NR0103-16
	Five largest political, lobbying, or tax-exempt group expenditures	Quantitative	U.S. Dollars (\$) by recipient	NR0103-17

¹⁰ Note to **NR0103-15** – Disclosure shall include a description of fines and settlements and corrective actions implemented in response to events.

Greenhouse Gas Emissions

Description

Oil and Gas R&M operations generate significant direct greenhouse gas (GHG) emissions, primarily of carbon dioxide and methane, from the stationary combustion of fossil fuels for energy consumption. Energy costs are a significant share of refinery operating costs. Greenhouse gases are also released from process emissions, fugitive emissions resulting from leaks, emissions from venting and flaring, and from non-routine events such as equipment maintenance. The energy intensity of production, and therefore the GHG emissions intensity, can vary significantly depending on the type of crude oil feedstock used and refined product specifications. Companies that cost-effectively reduce GHG emissions from their operations by implementing industry-leading technologies and processes can create operational efficiency. They can mitigate the impact on value of increased fuel costs and regulations that limit – or put a price on – carbon emissions in an environment of increasing regulatory and public concerns about climate change, in the U.S. and globally.

Accounting Metrics

NR0103-01. Gross global Scope 1 emissions, percentage covered under a regulatory program

- .01 The registrant shall disclose gross global Scope 1 greenhouse gas (GHG) emissions to the atmosphere of the six greenhouse gases covered under the Kyoto Protocol: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
 - Emissions of all gases shall be disclosed in metric tons of carbon dioxide equivalent (CO₂-e), calculated in accordance with published global warming potential (GWP) factors. To date, the preferred source for global warming potential factors is the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (2007).
 - Gross emissions are GHGs emitted to the atmosphere before accounting for any GHG reduction activities, offsets, or other adjustments for activities in the reporting period that have reduced or compensated for emissions.
- .02 Scope 1 emissions are defined by the World Resources Institute and the World Business Council on Sustainable Development (WRI/WBCSD) [The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard](#), Revised Edition, March 2004 (hereafter, the "GHG Protocol").
 - These emissions include direct emissions of GHGs from stationary or mobile sources; these sources include but are not limited to: equipment at well sites, production facilities, refineries, chemical plants, terminals, fixed site drilling rigs, office buildings, marine vessels transporting products, tank truck fleets, mobile drilling rigs, and moveable equipment at drilling and production facilities.
- .03 GHG emission data shall be consolidated according to the approach with which the registrant consolidates its financial reporting data, which is generally aligned with:
 - The Financial Control approach defined by the GHG Protocol and referenced by the [CDP Guidance for companies reporting on climate change on behalf of investors & supply chain members 2014](#) (hereafter, the "CDP Guidance").¹¹

¹¹ "An organization has financial control over an operation if it has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities. Generally an organization has financial control over an operation for GHG accounting purposes if the operation is treated as a group company or subsidiary for the purposes of financial consolidation." *Guidance for companies reporting on climate change on behalf of investors & supply chain members 2014* (p. 94).

- The financial approach detailed in Chapter 3 of the IPIECA/API/OGP Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions, Second Edition, 2011 (hereafter, the “IPIECA GHG Guidelines”).
 - The approach detailed in Section 4.23 “Organizational boundary setting for GHG emissions reporting” of Climate Disclosure Standards Board (CDSB) Climate Change Reporting Framework (CCRF).¹²
- .04 The underlying technical approach to data collection, analysis, and disclosure shall be consistent with the IPIECA GHG Guidelines and the CDP Guidance.
- The registrant shall consider the CDP Guidance as a normative reference; thus, any updates made year-on-year shall be considered updates to this guidance.
- .05 The registrant shall disclose the percentage of its emissions that are covered under a regulatory program, such as the European Union Emissions Trading Scheme (EU ETS), Western Climate Initiative (WCI), California Cap-and-Trade (California Global Warming Solutions Act), or other regulatory programs.
- Regulatory programs include cap-and-trade schemes and carbon tax/fee systems.
 - Disclosure shall exclude emissions covered under voluntary trading systems and disclosure-based regulations (e.g., the U.S. Environmental Protection Agency (EPA) mandatory reporting rule).
- .06 The registrant should discuss any change in its emissions from the previous fiscal year, such as if the change was due to emissions reductions, divestment, acquisition, mergers, changes in output, and/or changes in calculation methodology.
- .07 In the case that current reporting of GHG emissions to the CDP or other entity (e.g., a national regulatory disclosure program) differs in terms of the scope and consolidation approach used, the registrant may disclose those emissions. However, primary disclosure shall be according to the guidelines previously mentioned.
- .08 The registrant should discuss the calculation methodology for its emission disclosure, such as if data are from continuous emissions monitoring systems (CEMS), engineering calculations, mass balance calculations, etc.
- .09 This accounting metric corresponds to section CC8.2 of the Carbon Disclosure Project (CDP) Questionnaire and section 4.25 of the Climate Disclosure Standards Board (CDSB) Climate Change Reporting Framework (CCRF).

NR0103-02. Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

- .10 The registrant shall discuss the following where relevant:
- The scope, including if strategies, plans, and/or reduction targets pertain differently to different business units, geographies, or emissions sources.
 - If strategies, plans, and/or reduction targets are related to or associated with an emissions disclosure (reporting) or reduction program (e.g., EU ETS, Regional Greenhouse Gas Initiative (RGGI), WCI, etc.), including regional, national, international or sectoral programs.
 - The activities and investments required to achieve the plans and any risks or limiting factors that might affect achievement of the plans and/or targets.

¹² This approach is based on the requirements of the International Accounting Standards/International Financial Reporting Standards (IAS/IFRS) on consolidation and equity accounting. It is consistent with the way in which information relating to entities within a group, or interest in joint ventures/associates, would be included in consolidated financial statements. *Climate Change Reporting Framework*, CDSB.

.11 For emission reduction targets, the registrant shall disclose:

- The percentage of emissions within the scope of the reduction plan.
- The percentage reduction from the base year.
 - The base year is the first year against which emissions are evaluated towards the achievement of the target.
- Whether the target is absolute or intensity-based, and the metric denominator, if it is an intensity-based target.
- The timelines for the reduction activity, including the start year, the target year, and the base year. Disclosure shall be limited to activities that were ongoing (active) or that reached completion during the fiscal year.
- The mechanism(s) for achieving the target, such as energy efficiency efforts, energy source diversification, carbon capture and storage, etc.

.12 Where necessary, the registrant shall discuss any circumstances in which the target base year emissions have been, or may be, re-calculated retrospectively, or in which the target base year has been reset.

.13 This accounting metric corresponds with:

- CDSB Section 4, "Management Actions"¹³
- CDP questionnaire "CC3. Targets and Initiatives"

¹³ 4.12, "Disclosure shall include a description of the organization's long-term and short-term strategy or plan to address climate change-related risks, opportunities and impacts, including targets to reduce GHG emissions and an analysis of performance against those targets." *Climate Change Reporting Framework – Edition 1.1*, October 2012, CDSB.

Air Quality

Description

Other air emissions from R&M operations include criteria air pollutants, Volatile Organic Compounds (VOCs), and hazardous air pollutants, which can have significant, localized human health and environmental impacts. Specific emissions of concern include sulfur dioxide, nitrogen oxides, hydrogen sulfide, particulate matter, and VOCs. Releases occur from stationary combustion sources, storage vessels, flares, and equipment leaks, and may also occur as a result of accidents. Human health impacts and financial consequences for R&M companies are likely to be exacerbated the closer a facility is to a local community. Active management of the issue – through technological and process improvements – could allow companies to limit the impact of regulations and benefit from operational efficiencies that could lead to a lower cost structure over time.

Accounting Metrics

NR0103-03. Air emissions for the following pollutants: NO_x (excluding N₂O), SO_x, particulate matter (PM), H₂S, and volatile organic compounds (VOCs)

- .14 The registrant shall disclose its emissions released to the atmosphere of air pollutants associated with refining and marketing operations, such as:
 - Direct air emissions from stationary or mobile sources include, but are not limited to, production facilities, refineries, chemical plants, terminals, office buildings, marine vessels transporting products, tank truck fleets, and moveable equipment at production facilities.
- .15 The registrant shall disclose emissions consistent with IPECA's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting, as noted below.
- .16 The registrant shall disclose the following emissions released to the atmosphere from refining and marketing operations by emissions type:
 - Oxides of nitrogen (including NO and NO₂ and excluding N₂O), reported as NO₂.
 - Oxides of sulfur (SO₂ and SO₃), reported as SO₂.
 - Particulate matter (PM), reported as the sum of PM₁₀ and PM_{2.5}, or all particulates less than 10 micrometers in diameter.
 - Hydrogen sulfide (H₂S).
 - Non-methane volatile organic compounds (VOCs), defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane, which participates in atmospheric photochemical reactions, except those designated by the EPA as having negligible photochemical reactivity.
- .17 This scope does not include CO₂, CH₄, and N₂O, which are disclosed in NR0103-01, as Scope 1 GHG emissions.
- .18 Air emissions data shall be consolidated according to the approach with which the registrant consolidates its financial reporting data, which is aligned with the consolidation approach used for NR0103-01.

.19 The registrant should discuss the calculation methodology for its emissions disclosure, such as whether data are from continuous emissions monitoring systems (CEMS), engineering calculations, mass balance calculations, etc.

NR0103-04. Number of refineries in or near areas of dense population

.20 The registrant shall disclose the number of its refineries that are located in or near areas of dense population, which are defined as urbanized areas according to U.S. Census Bureau definitions.¹⁴

- Generically, these include urbanized areas with population greater than 50,000.
- A list of urbanized areas is available based on census results, with the list from 2010 accessible [here](#).

.21 The scope of disclosure includes refineries that are located in a census tract or block considered to be in an urbanized area or are within 49 kilometers of an urbanized area.¹⁵

.22 For refineries located outside of the U.S., the registrant shall use available census data to determine whether the refinery is located in an urbanized area, as defined by the U.S. Census Bureau.

- In the absence of available or accurate census data, the registrant should use international population density data available from the Columbia University/NASA Socioeconomic Data and Applications Center's (SEDAC) Gridded Population of the World (GPW), v3.

¹⁴ "Federal Register." U.S. Department of Commerce. Vol. 76. No. 164. August 24, 2011. <http://www.census.gov/geo/reference/pdfs/fedreg/fedregv76n164.pdf>

¹⁵The 49 km radius is based on definition of "exposed population" from the U.S. EPA's Office of Pollution Prevention and Toxics, User's Manual for RSEI Version 2.3.2., July 2013: "The exposed population is the population that is likely to come in contact with a chemical. The population differs depending on the exposure pathway modeled. For instance, the population exposed to chemicals released to air is the population in a circle with a radius of 49 km surrounding the facility."

Water Management

Description

Refineries can use relatively large quantities of water depending on their size and the complexity of the refining process. This exposes them to the risk of reduced water availability, depending on their location, and related cost increases. Extraction of water from water-stressed regions or water contamination may also create tensions with local communities. Refinery operations lead to process wastewater and surface water runoff, with many of the waste streams requiring treatment at on-site wastewater treatment plants before discharge. Reducing water use and contamination through recycling and other water management strategies could create operational efficiency for companies and lower their operating costs. They could also minimize the impacts of regulations, water supply shortages, and community-related disruptions on operations.

Accounting Metrics

NR0103-05. Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress

- .23 The registrant shall disclose the amount of water (in cubic meters) that was withdrawn from freshwater sources for use in operations.
- Fresh water may be defined according to the local statutes and regulations where the registrant operates.
 - Where there is no regulatory definition, fresh water shall be considered to be water that has a total dissolved solids (TDS) concentration of less than 1000 mg/l per the Water Quality Association [definition](#).
- .24 Water obtained from a water utility can be assumed to meet the definition of freshwater.¹⁶
- .25 The registrant shall disclose the percentage of water recycled as the volume (in cubic meters) recycled divided by the volume of water withdrawn.
- Any volume of water reused multiple times shall be counted as recycled each time it is recycled and reused.
- .26 Using the World Resources Institute's (WRI) Water Risk Atlas tool, Aqueduct (publicly available online [here](#)), the registrant shall analyze all of its operations for water risks and identify facilities that are in a location with High (40–80%) or Extremely High (>80%) Baseline Water Stress. Water withdrawn in locations with High or Extremely High Baseline Water Stress shall be indicated as a percentage of the total water withdrawn.
- .27 This accounting metric corresponds to section W5. Water Accounting of the CDP's [2014 Water Information Request](#).

NR0103-06. Number of incidents of non-compliance with water quality permits, standards, and regulations

- .28 The registrant shall disclose the total number of instances of non-compliance, including violations of a technology-based standard or exceedances of a quality-based standard.
- .29 The scope of disclosure includes incidents related to statutory permits and regulations or voluntary agreements, standards, or guidelines, such as total maximum daily load (TMDL) exceedances.

¹⁶ <http://water.epa.gov/drink/contaminants/secondarystandards.cfm>

- .30 Voluntary standards include the registrant's own water quality standards (parameters) or "effluent guidelines" from the International Finance Corporation's (IFC) "Environmental, Health, and Safety Guidelines for Petroleum Refining."
- .31 Typical parameters of concern include: hydrocarbons (including oil and grease), chemical oxygen demand (COD)/biochemical oxygen demand (BOD), sulfides, ammonia, phenols, total suspended solids (TSS), and total dissolved solids (TDS).
- .32 An incident of non-compliance shall be disclosed regardless of whether it resulted in an enforcement action (e.g., fine, warning letter, etc.).
- .33 Violations, regardless of their measurement methodology or frequency, shall be disclosed. These include:
- For continuous discharges, limitations, standards, and prohibitions that are generally expressed as maximum daily, weekly average, and monthly average.
 - For non-continuous discharges, limitations that are generally expressed in terms of frequency, total mass, maximum rate of discharge, and mass or concentrations of specified pollutants.

Hazardous Materials Management

Description

R&M companies face regulatory and operational challenges in managing waste generated by their activities and in handling and storing petroleum products. Many of these substances are hazardous to human health and the environment. Both active and closed sites have the potential to create contamination through waste and other hazardous materials. Remediation often takes several years to be completed, and companies could continue to accrue liabilities for past operations. Releases of hazardous substances from underground storage tanks (USTs) used by refining facilities and gas stations can affect redevelopment of land for abandoned or closed facilities. Spills and releases during operations can lead to groundwater contamination and other negative impacts. R&M companies that reduce and recycle hazardous waste streams ensure the integrity of their USTs, and have effective and prompt clean-up and remediation measures in place for normal operations and closed facilities could lower regulatory and litigation risks and costs.

Accounting Metrics

NR0103-07. Amount of hazardous waste from operations, percentage recycled

.34 The amount of hazardous waste shall be calculated in metric tons, where:

- Waste is generally defined as anything for which the registrant has no further use and is discarded or released to the environment.
- Hazardous waste is waste that meets the definition of hazardous waste under Subtitle C of the U.S. Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA).
 - Hazardous wastes include those that display the following characteristics: ignitability, corrosivity, reactivity, or toxicity.

.35 The percentage recycled shall be calculated as the weight of waste material that was reused, plus the weight recycled or remanufactured (through treatment or processing) by the registrant, plus the amount sent externally for further recycling, divided by the total weight of waste material, where:

- Reused materials are defined as those recovered products or components of products that are used for the same purpose for which they were conceived.
- Recycled and remanufactured materials are defined as waste materials that have been reprocessed or treated by means of production or manufacturing processes and made into a final product or made into a component for incorporation into a product.
- The scope of recycled and remanufactured products includes primary recycled materials, co-products (outputs of equal value to primary recycled materials), and by-products (outputs of lesser value to primary recycled materials).
- Portions of products and materials that are disposed of in landfills are not considered recycled; only the portions of products that are directly incorporated into new products, co-products, or by-products shall be included in the percentage recycled.
- Materials sent for further recycling include those materials that are transferred to a third party for the

expressed purpose of reuse, recycling, or refurbishment.

- Materials incinerated, including for energy recovery, are not considered reused or recycled. Energy recovery is defined as the use of combustible waste as a means to generate energy through direct incineration, with or without other waste, but with recovery of the heat.

NR0103-08. Number of underground storage tanks (USTs), number of UST releases requiring cleanup, percentage in states with UST financial assurance funds

- .36 The registrant shall disclose the number of underground storage tank systems (USTs) for petroleum and hazardous substances.
- The scope of disclosure includes, at a minimum, USTs as defined by 40 CFR §280.12.
 - The scope of disclosure includes active USTs and those closed during the fiscal year.
- .37 The registrant shall disclose the number of UST releases (including leaks, spills, overfills, corrosion, etc.) for which the registrant had some degree of cleanup responsibilities (i.e., including shared cost of remediation).
- .38 The scope of disclosure includes new incidents that occurred during the fiscal year as well as past events (e.g., legacy cleanup) for which the registrant was notified of responsibility during the fiscal year.
- .39 The scope of disclosure includes release from petroleum USTs and hazardous chemical USTs.
- .40 The registrant shall disclose the number of UST incidents that occurred in states with UST financial assurance funds.
- The registrant shall further indicate any incidents that were legacy events in states that do not provide coverage for past events and any incidents that were not eligible for coverage under the rules of state UST trust funds.
- .41 The registrant may choose to describe its effort to maintain compliance with the Federal Underground Storage Tank Program, including its method/process to prevent UST spills, overfills, and corrosion.

Health, Safety, and Emergency Management

Description

The R&M industry poses risks to employee health and safety because of the use of flammable hydrocarbons and high temperatures and pressures in refining operations. Accidents or inadvertent exposures to chemicals and other hazards such as heat or noise, during both routine and non-routine activities, may result in fatalities, severe injuries, or illnesses. Significant releases of hydrocarbons or other hazardous substances as a result of accidents or leaks can also have negative consequences for neighboring communities. Organizational research and previous incidents show that it is important for a company to develop a culture of safety, one that reduces the probability of accidents and other health and safety incidents. If accidents and other emergencies do occur, companies with a strong safety culture can effectively detect and respond to such incidents. Along with effective process safety management practices, a culture that engages and empowers employees to work with management in to safeguard their own health and safety and prevent accidents, is likely to help companies reduce production downtime, mitigate or eliminate costs, and ensure workforce productivity.

Accounting Metrics

NR0103-09. (1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees

- .42 For registrants whose workforce is entirely U.S.-based, the registrant shall disclose its total recordable injury rate (TRIR) and fatality rate, as calculated and reported in the Occupational Safety and Health Administration's (OSHA) Form 300.
- OSHA guidelines provide details on determination of whether an event is a recordable occupational incident and definitions for exemptions for incidents that occurred in the work environment but are not occupational.
- .43 For registrants whose workforce includes non-U.S.-based employees, the registrant shall calculate its total recordable injury rate and fatality rate according to the U.S. Bureau of Labor Statistics [guidance](#) and/or using the U.S. Bureau of Labor Statistics [calculator](#).
- .44 The registrant shall disclose its Near Miss Frequency Rate (NMFR), where a near miss is defined as an incident in which no property or environmental damage or personal injury occurred, but where damage or personal injury easily could have occurred but for a slight circumstantial shift.
- The registrant should refer to organizations such as the National Safety Council (NSC) for guidance on implementing near miss reporting.
 - The registrant should disclose its process for classifying, identifying, and reporting near miss incidents.
- .45 The registrant shall disclose its TRIR, Fatality Rate, and NMFR for each of the following categories of employee:
- Direct, full-time employees
 - Contract employees
- .46 The scope includes all domestic and foreign employees.
- .47 Rates shall be calculated as: $(\text{statistic count} / \text{total hours worked}) * 200,000$.

NR0103-10. Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)

.48 The registrant shall disclose Tier 1 process safety event (PSE) rates and Tier 2 PSE rates for instances of loss of primary containment (LOPC) using terms and definitions from the ANSI/API Recommended Practice 754 – Process Safety Performance Indicators for the Refining and Petrochemical Industries (hereafter, ANSI/API RP-754)

.49 A PSE is defined as an unplanned or uncontrolled loss of primary containment (LOPC) of any material including non-toxic and non-flammable materials (e.g. steam, hot condensate, nitrogen, compressed CO₂ or compressed air) from a process, or an undesired event or condition that, under slightly different circumstances, could have resulted in an LOPC of a material.

- LOPC is a type of event.
- An unplanned or uncontrolled release is an LOPC irrespective of whether the material is released into the environment, or into secondary containment, or into other primary containment not intended to contain the material released under normal operating conditions.

.50 A Tier 1 PSE is defined as a loss of primary containment (LOPC) with the greatest consequence, resulting in one or more of the following consequences:

- An employee, contractor or subcontractor experiencing a “days away from work” injury and/or fatality.
- A hospital admission and/or fatality of a third party.
- An officially declared community evacuation or community shelter-in-place.
- A fire or explosion resulting in greater than or equal to \$25,000 in direct costs to the registrant.
- A pressure relief device (PRD) discharge to atmosphere, whether directly or via a downstream destructive device that results in one or more of the following four consequences:
 - Liquid carryover
 - Discharge to a potentially unsafe location
 - An onsite shelter-in-place
 - Public protective measures (e.g., road closure) and a PRD discharge quantity greater than the threshold quantities specified in Table 1 of ANSI/API RP-754 in any one-hour period.
- A release of material greater than the threshold quantities specified in Table 1 of ANSI/API RP-754 in any one-hour period.

.51 A Tier 2 PSE is defined as a loss of primary containment (LOPC) with lesser consequence, not disclosed as a Tier 1 PSE, and resulting in one or more of the following consequences:

- An employee, contractor or subcontractor recordable injury.
- A fire or explosion resulting in greater than or equal to \$2,500 in direct costs to the registrant.
- A pressure relief device (PRD) discharge to atmosphere, whether directly or via a downstream destructive

device that results in one or more of the following four consequences:

- Liquid carryover
- Discharge to a potentially unsafe location
- An onsite shelter-in-place
- Public protective measures (e.g., road closure) and a PRD discharge quantity greater than the threshold quantities specified in Table 2 of ANSI/API RP-754 in any one-hour period.
- A release of material greater than the threshold quantities specified in Table 2 of ANSI/API RP-754 in any one-hour period.

.52 The Tier 1 PSE Rate shall be calculated as: $(\text{Total Tier 1 PSE Count} / \text{Total Hours Worked}) * 200,000$.

.53 The Tier 2 PSE Rate shall be calculated as: $(\text{Total Tier 2 PSE Count} / \text{Total Hours Worked}) * 200,000$.

.54 Total hours worked include employees and contractors.

NR0103-11. Challenges to Safety Systems indicator rate (Tier 3)

.55 The registrant shall disclose a rate of Tier 3 “challenges to safety systems” using terms, definitions, and guidance from the ANSI/API RP-754 (Section 7.2).

Tier 3 indicators may alternatively be referred to as “near miss” events or “high learning value” events.

.56 A Tier 3 operational situation is defined as a flaw or weakness within internal technical safety systems that led to consequences that fall below the Tier 1 and Tier 2 LOPC impact threshold, such as:

- Demands on safety systems, which are activations (non-manual) of safety systems designed to prevent or mitigate impacts from losses of primary containment, such as mechanical shutdown equipment or pressure relief devices.
- Safe operating limit excursions, which are breaches of safe operating limits for processes beyond which manual or automatic systems return the process to a predetermined safe state.
- Primary containment inspections or testing results outside acceptable limits, which occur when inspection or testing shows that safe primary containment operating limits have been exceeded and require repairs, replacement, or further testing of equipment.
- Near miss incidents, which are incidents that had the potential to result in an LOPC, but that were avoided by circumstance.

.57 Disclosure may include situations with no actual consequences but the recognition that, in other circumstances, further barriers could have been breached and results in a Tier 1 or Tier 2 PSE.

.58 The Tier 3 indicator rate shall be calculated as: $(\text{Total Tier 3 Indicator Count} / \text{Total Hours Worked}) * 200,000$.

.59 Total hours worked include employees and contractors.

NR0103-12. Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators

- .60 The registrant shall describe its approach to identifying, measuring, and managing “Operating Discipline and Management System Performance,” or Tier 4 key performance indicators (KPIs).
- .61 Tier 4 indicators are metrics developed by the registrant – specific to its facilities, operations, and safety priorities – that measure leading, proactive measures to maintain and improve safety and manage risk.
- .62 Relevant Tier 4 KPIs may be focused on:
- Engineering and inherently safe design
 - Equipment maintenance, inspection and testing
 - Process hazard and major incident risk assessments
 - Quality of, and adherence to, operating procedures
 - Contractor capability and management
 - Audit improvement actions
 - Asset integrity and process safety initiatives
 - Workforce and management training and development
 - Technical competence assessment and assurance
- .63 Discussion may include the use of specific Tier 4 key performance indicators (KPI) such as those suggested in ANSI/API RP-754. Examples of Tier 4 KPIs are:
- Number of process area retrospective and revalidation hazard evaluations completed on time
 - Percentage and/or number of past-due process safety actions
 - Percentage of process safety required training sessions completed with skills verification
- .64 It is not recommended that the registrant disclose quantitative data or figures for its Tier 4 KPIs because they are generally not suitable for peer-to-peer benchmarking and may not be relevant at a corporate level (i.e., they may be refinery-specific). It may be relevant, however, to discuss:
- Trends in Tier 4 KPIs over time and how they are correlated with the frequency of Tier 1, Tier 2, and Tier 3 indicator rates (e.g., that an increase in the focus on Tier 4 performance can be correlated with a decrease in the Tier 1 PSE rate)
 - Application and topical focus of Tier 4 KPIs for different facilities, business units, geographies, employee categories, etc.

Product Specifications & Clean Fuel Blends

Description

Human health risks and emerging environmental trends such as climate change have raised concerns about the end use of products such as gasoline from the R&M industry. Increasingly stringent regulations related to product specifications and renewable fuel blends pose significant compliance and operational risks for R&M companies. Companies could face long-term reductions in revenue from fossil fuel-based products and services due to GHG mitigation policies such as the Renewable Fuel Standard, as well as competition from non-fossil fuel products. Companies that purchase credits known as renewable identification numbers (RINs) to meet regulatory requirements for renewable fuels can face regulatory and cost risks. In order to ensure regulatory compliance and position themselves for long-term competitiveness, some companies are investing in or purchasing ethanol and other renewable biofuels. Advanced biofuels and fuel technologies have lower lifecycle impacts than traditional biofuels, and can be used to minimize future regulatory risks and public pressure. Although short-term costs to find commercially viable technologies can be significant, investments in R&D for such technologies could serve to advance R&M companies' long-term profitability.

Accounting Metrics

NR0103-13. Percentage of Renewable Volume Obligation (RVO) met through: (1) Production of renewable fuels, (2) Purchase of "separated" renewable identification numbers (RIN)

- .65 The registrant shall disclose the percentage of its RVO met through the production of renewable fuels, including biofuels, cellulosic biofuel, ethanol, advanced biofuels, etc. as defined in [40 CFR 80.1401](#).
- .66 The registrant shall disclose the percentage of its RVO met through purchase of "separated" renewable identification numbers (RIN).
- A separated RIN is defined as one that is no longer associated with a physical product and may be traded on an open market.
- .67 The registrant may choose to provide a break down and analysis of its RVO by fuel type: cellulosic biofuels, ethanol equivalent for biomass-based diesel, or advanced biofuels.

NR0103-14. Total addressable market and share of market for advanced biofuels and associated infrastructure

- .68 The registrant shall provide an estimation of the total addressable market for advanced biofuels and associated infrastructure.
- Total addressable market is defined as potential revenue (in billions of U.S. dollars), should the registrant capture 100 percent of the market share of the product category (e.g., the global market for advanced biofuels and advanced biofuel infrastructure).
- .69 If there is a significant difference between the total addressable market and the market that the registrant can serve through its existing or planned capabilities, sales channels, or products (i.e., the serviceable available market) then the registrant should disclose this information.

- .70 The registrant shall disclose the share of the total addressable market for advanced biofuels and/or associated infrastructure that it currently captures with its products.
- Market share shall be calculated as revenues from these products divided by the size of the total addressable market.
- .71 Advanced biofuels are defined according to Section 201 of the Energy Independence and Security Act of 2007 (EISA) as biofuels other than ethanol derived from corn starch (kernels) and having 50% lower lifecycle greenhouse gas emissions relative to gasoline.
- .72 Revenue from advanced biofuel infrastructure includes that from retail operations (i.e., fuel stations), joint ventures with primary producers, or technologies that enable the production of advanced biofuels.
- .73 The registrant may provide a projection of growth of this market, where the projected addressable market is represented – based on a reasonable set of assumptions about changes in market conditions – as a percentage of year-on-year growth or as an estimate of the market size after a defined period (i.e., the market size in 10 years).
- The registrant may disclose its target 3-year market share as a measurement of targeted growth, where the target is the percentage of the total addressable market that the registrant plans to address over a three-year time horizon.
- .74 The registrant may choose to discuss other non-revenue generating initiatives it has undertaken to commercialize biofuels, such as partnerships (e.g., pilot projects, research and development projects) with fleet operators (air, ground, or marine transportation), airlines, vehicle manufacturers, and governmental agencies (e.g., USDA, DOE, armed forces, etc.).

Pricing Integrity & Transparency

Description

Concerned about the impacts of oil and gas market distortions on American consumers and businesses, regulators such as the U.S. Federal Trade Commission (FTC), and the U.S. Commodity Futures Trading Commission (CFTC), have focused on and investigated market manipulation by oil and gas companies, including R&M companies, in recent years. Regulatory agencies focusing on refineries are investigating utilization and maintenance decisions, product supply decisions, product margins, and capital planning, creating uncertainty regarding future enforcement. The focus of enforcement actions thus far has been on reporting prices to price index publishers, as well as distortion of prices using trading positions in physical transactions, and swaps, futures, and derivatives. Maintaining market integrity and ensuring transparency in product pricing can therefore lower regulatory risks and liabilities for R&M companies and protect consumers from unfair pricing.

Accounting Metrics

NR0103-15. Amount of legal and regulatory fines and settlements associated with price fixing or price manipulation

- .75 The registrant shall disclose the amount (excluding legal fees) of all fines or settlements associated with price gouging, price fixing, or price manipulation, including but not limited to those with the U.S. Commodities Futures Trade Commission and Federal Trade Commission.
- .76 Disclosure shall include civil actions (e.g., civil judgment, settlements, or regulatory penalties) and criminal actions (e.g., criminal judgment, penalties, or restitutions) taken by any entity (government, businesses, or individuals).

Note to NR0103-15

- .77 The registrant shall briefly describe the nature (e.g., guilty plea, deferred agreement, or non-prosecution agreement) and context (e.g., price-fixing, false price reporting, etc.) of fines and settlements.
- .78 The registrant shall describe any corrective actions it has implemented as a result of each incident. This may include, but is not limited to: specific changes in operations, management, processes, products, business partners, training, or technology.

Management of the Legal & Regulatory Environment

Description

The interaction of companies in the R&M industry with their legal and regulatory environment can have material impacts on shareholder value, both when they spend significant amounts on related activities such as lobbying and political contributions, and as a result of changes in laws or policies that can affect operations. In particular, climate change and environmental laws and regulations can have material impacts on business. However, given the scientific consensus that human-induced climate change is occurring, efforts to delay climate-related policy or legislative changes may prove counterproductive to the industry in the long term, by creating regulatory, and therefore investment, uncertainty, or by imposing higher costs in the future. Efforts to unfairly influence environmental laws and regulations may affect companies' reputations and social license to operate. Companies with a well-articulated strategy for engaging with policymakers and regulators—one that is aligned with their goals and activities for long-term sustainable outcomes and also accounts for societal externalities—could benefit from a stronger, long-term license to operate. Such companies will likely be better prepared for medium- to long-term regulatory adjustments that deal with global, high-impact issues such as climate change.

Accounting Metrics

NR0103-16. Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations

.79 The registrant shall disclose its total monetary contributions to political campaigns, lobbyists or lobbying organizations, and those to tax-exempt groups, including trade associations that aim to influence political campaigns or participate in political lobbying.

.80 The scope of disclosure includes the following:

- Political spending that includes any direct or indirect contributions or expenditures in support of, or opposition to, a candidate for public office or a ballot measure.
- Any payments made to trade associations or tax-exempt entities that are used to influence a political campaign (including advocacy organizations, commonly classified as social welfare organizations under Section 501(c)(4) of the Internal Revenue Code).
- Any direct or indirect political expenditure (one-time or recurring) that must be reported to the Federal Election Commission, the Internal Revenue Service, or a state disclosure agency.
- Any direct or indirect contributions to registered lobbyists or lobbying organizations, including contributions made to trade organizations, which in turn contribute to political lobbying efforts.

NR0103-17. Five largest political, lobbying, or tax-exempt group expenditures

- .81 The registrant shall disclose the recipients of its five largest contributions disclosed in NR0103-16, defined as the five largest amounts in aggregate during the fiscal year, that were contributed to an individual candidate, organization, ballot measure, or lobbying issue topic.
- .82 The registrant shall disclose the amount (in U.S. dollars) contributed to each individual, organization, ballot measure, or lobbying issue topic.
- .83 The registrant shall consider lobbying issue topics, at a minimum, to be general lobbying issue codes [defined](#) by the Lobbying Disclosure Act of 1995, but should include specific lobbying issues where available.

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