SUSTAINABILITY ACCOUNTING STANDARD
NON-RENEWABLE RESOURCES SECTOR

OIL & GAS - SERVICES
Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #NR0104

Prepared by the
Sustainability Accounting Standards Board®

June 2014
Provisional Standard

OIL & GAS - SERVICES

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 - Services.

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 and gas services companies provide support services, manufacture equipment, or are contract drillers for oil and natural gas exploration and production (E&P) companies. The drilling and drilling-support segment comprises companies that drill for oil and natural gas on-shore and off-shore on a contract basis. Companies in this segment may also manufacture jack-up rigs, semisubmersible rigs, and drill ships. Companies in the oilfield services segment manufacture equipment that is used in the extraction, storage, and transportation of oil and natural gas. They also provide support services such as seismic surveying, equipment rental, well cementing, and well monitoring. The activities mentioned are commonly provided on a contractual basis, and the customer will purchase or lease the materials and equipment from the service provider. The contractual relationship between oil and gas services companies and their customers plays a significant role in determining the material impacts of their sustainability performance. Besides the rates charged, companies compete on the basis of their operational and safety performance, technology and process offerings, and reputation. Larger companies in the industry operate globally.

Guidance for Disclosure of Material Sustainability Topics in SEC Filings

1 . Industry-Level Material Sustainability Topics

For the Oil & Gas - Services industry, SASB has identified the following material sustainability topics

- **Emissions Reduction Services & Fuels Management**
- **Water Management Services**
- **Chemicals Management**
- **Ecological Impact Management**
- **Health, Safety, and Emergency Management**
- **Business Ethics & Payments 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:

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[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**—lItem 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 Services 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-20[4] —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 l**ast 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 (SICS™). 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.

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[4] SEC 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."

[5] Registration 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.

[6] See 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
Number of active rig sites[7]	Quantitative	Number	NR0104-A
Number of active well sites[8]	Quantitative	Number	NR0104-B
Total amount of drilling performed	Quantitative	Meters (m)	NR0104-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 **NR0104-A** – Rigs that are on location and involved in drilling, completions, cementing, fracturing, decommissioning etc., are considered active. Rigs that are in transit from one location to another, or are otherwise idled, are inactive.

[8] Note to **NR0104-B** – The number of well sites for which the registrant has provided or is providing (on an ongoing basis) drilling, completion, fracturing, and/or decommissioning services.

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
Emissions Reduction Services & Fuels Management	Total fuel consumed, percentage renewable, percentage used in: (1) on-road equipment and vehicles and (2) off-road equipment	Quantitative	Gigajoules (GJ), Percentage (%)	NR0104-01
	Description of strategy or plans to address air emissions-related risks, opportunities, and impacts	Discussion and Analysis	n/a	NR0104-02
	Percentage of engines in service that meet Tier 4 compliance for non-road diesel engine emissions	Quantitative	Percentage	NR0104-03
Water Management Services	Average volume of water used per volume of gas or oil extracted by (1) fresh water and (2) recycled water	Quantitative	Cubic meters (m^3) per million cubic feet (MMscf) or million barrels (MMbbl)	NR0104-04
	Description of strategy or plans to address water consumption and disposal-related risks, opportunities, and impacts	Discussion and Analysis	n/a	NR0104-05
Chemicals Management	Average amount of hydraulic fracturing fluid and proppant consumed per volume of gas or oil extracted	Quantitative	Cubic meters (m^3), Kilograms (kg) per MMscf or MMbbl	NR0104-06
	Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	Quantitative	Percentage (%)	NR0104-07
	Description of strategy or plans to address chemical-related risks, opportunities, and impacts	Discussion and Analysis	n/a	NR0104-08
Ecological Impact Management	Average disturbed acreage per (1) oil and (2) gas well site	Quantitative	Acres	NR0104-09
	Description of strategy or plan to address risks and opportunities related to ecological impacts from core activities	Discussion and Analysis	n/a	NR0104-10
Health, Safety, and Emergency Management	(1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, (3) Near Miss Frequency Rate, and (4) Total Vehicle Incident Rate (TVIR) for (a) full-time employees, (b) contract employees, and (c) short-service employees	Quantitative	Rate	NR0104-11
	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and project lifecycles	Discussion and Analysis	n/a	NR0104-12

Table 1. Material Sustainability Topics & Accounting Metrics (cont.)

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Business Ethics & Payments Transparency	Amount of net revenue in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Quantitative	U.S. dollars ($)	NR0104-13
	Description of the management system for prevention of corruption and bribery throughout the value chain	Discussion and Analysis	n/a	NR0104-14
Management of the Legal & Regulatory Environment	Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations	Quantitative	U.S. Dollars ($)	NR0104-15
	Five largest political, lobbying, or tax-exempt group expenditures	Quantitative	U.S. Dollars ($)	NR0104-16

Emissions Reduction Services & Fuels Management

Description

While direct emissions and associated regulatory risks are relatively low for oil and gas services providers, emissions from the operations of their customers—the oil and gas exploration and production (E&P) companies—can be significant. Emissions include greenhouse gases that can contribute to climate change as well as other air pollutants that can have significant localized human health and environmental impacts. Increasing regulation and high costs of fuels associated with these emissions present substantial risk to E&P companies. This is driving companies to seek ways to lower their emissions, including converting pumps and engines to run on natural gas instead of diesel fuel. Oil and gas services companies compete for contracts with E&P companies partly on the basis of providing cutting-edge, efficient technologies that can help customers reduce costs and improve process efficiencies. Services companies can gain a competitive advantage and protect their revenues and market share by providing customers with services and equipment that reduce the emissions and fuel consumption of E&P operations, and by capturing saleable gas that may otherwise be flared or escape through leaks.

Accounting Metrics

NR0104-01. Total fuel consumed, percentage renewable, percentage used in: (1) on-road equipment and vehicles, (2) off-road equipment

.01 The registrant shall disclose total fuel consumption from all sources as an aggregate figure in gigajoules or its multiples, broken down for (1) on-road, mobile equipment and vehicles and (2) off-road equipment, including stationary rigs, generators, and mounted equipment.

- The scope includes only fuel consumed by entities owned or controlled by the organization.
- The scope excludes non-fuel energy sources such as purchased electricity and purchased steam.
- The scope of disclosure includes combustion sources owned and/or operated by the registrant, regardless of which entity bears the cost of fuel and/or considers greenhouse gas (GHG) emissions from these sources to be part of its Scope 1 inventory.

.02 In calculating the energy content of fuels and biofuels, the registrant shall use higher heating values (HHV), also known as gross calorific values (GCV), which are directly measured or taken from the Intergovernmental Panel on Climate Change (IPCC), the U.S. Department of Energy (DOE), or the U.S. Energy Information Administration (EIA).

.03 The registrant shall calculate the percentage of fuel from renewables as the energy content of renewable fuel consumed, divided by the energy content of all fuel consumed.

.04 Renewable fuel is defined as fuel from sources that are capable of being replenished in a short period of time through ecological cycles, such as geothermal, wind, solar, hydro, and biomass.

- For the purposes of this disclosure, the scope of renewable fuel from biomass sources are limited to those that are considered "eligible renewables" according to the Green-e Energy National Standard Version 2.4.

.05 The registrant shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel usage (including biofuels).

NR0104-02. Description of strategy or plans to address air emissions-related risks, opportunities, and impacts

.06 The registrant shall discuss the scope of its strategies, plans, and/or emissions reduction activities, such as whether they pertain differently to different business units, geographies, or emissions sources.

.07 The registrant shall discuss 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.

.08 The registrant shall discuss demand for specific products, services, and technologies that reduce well and field operator's fuel consumption, emissions, and/or create other efficiencies, and its ability to meet this demand.

.09 The registrant shall discuss its short term and long term plans related to air quality management, where:

- Short-term strategies may include fuel substitution (e.g., drop-in biodiesel), use of dual fuel equipment, or engine maintenance.
- Long-term strategies may include alternative fuel equipment, process, or equipment redesigns and innovations, carbon capture, and storage.

.10 The scope of disclosure shall relate to emissions from the following specific sources:

- Combustion emissions (e.g., fuel use in gas compression, power generation, etc.).
- Flaring of hydrocarbons (e.g., in depressurizing, start-up/shut-down, well testing and well work-over, etc.).
- Process emissions (e.g., vessel loading, tank storage, and flushing, etc.).
- Venting of hydrocarbons, defined as the intentional (or designed), controlled release of gas to the atmosphere during normal operations.
- Fugitive emissions of GHGs (including equipment leaks).
- Non-routine events (e.g., gas releases or equipment maintenance).

.11 The registrant shall discuss risks and opportunities it may face relating to being able to offer its customers services, technologies, or solutions that enhance energy efficiency and reduce air emissions, including of GHGs.

NR0104-03. Percentage of engines in service that meet Tier 4 compliance for non-road diesel engine emissions

.12 The registrant shall disclose the percentage of its new and in-use non-road diesel engines – those used in equipment, pumps, compressors, generators, etc. – that are in compliance with the U.S. EPA's Tier 4 emissions standards for non-road diesel engines.

.13 The registrant shall calculate the percentage as the fiscal year's new and in-use number of non-road diesel engines that are in full compliance with the Tier 4 emissions standards, divided by the total number of non-road diesel engines active for the fiscal year, where:

- An engine is considered in compliance with the Tier 4 emission standards if it belongs to an engine family which has test results showing official emission results and deteriorated emission levels at or below these standards, and the engine family has received a certificate of conformity from the EPA for that model year.

- Engine families are defined as engine product lines that are expected to have similar emissions characteristics, as defined by CFR§1039.230.

.14 Engines that are exempt from the EPA rules, such as certain marine engines, shall be exempt for the purposes of this disclosure.

.15 The scope of disclosure includes domestic and foreign operations, regardless of whether they are under U.S. EPA jurisdiction.

.16 The scope of disclosure includes non-road diesel engines manufactured, owned, and/or operated by the registrant, regardless of which entity bears the EPA compliance obligation.

Water Management Services

Description

Oil and gas extraction often requires large quantities of water, exposing producers to the risk of reduced water availability, regulations limiting usage, or related cost increases, particularly in water-stressed regions. Producers also face risks and costs associated with wastewater disposal. Companies in the Oil & Gas Services industry have developed technologies and processes such as closed-loop water recycling systems to reduce customers' water consumption and disposal costs. These offerings provide service companies the potential to gain market share and increase revenues, as management of drilling and waste water is emerging as a major concern for their customers.

Accounting Metrics

NR0104-04. Average volume of water used per volume of gas or oil extracted by (1) fresh water and (2) recycled water

.17 The registrant shall disclose the volume of fresh water used per volume of hydrocarbons extracted as:

- Cubic meters (m3) of fresh water per million cubic feet (MMscf) of natural gas extracted and/or cubic meters of fresh water per million barrels (MMbbl) oil extracted.

.18 The registrant shall disclose the volume of recycled water used per volume of hydrocarbons extracted as:

- Cubic meters (m3) of recycled water per million cubic feet (MMscf) of natural gas extracted and/or cubic meters of recycled water per million barrels (MMbbl) oil extracted.

.19 Fresh water may be defined according to the local statutes and regulations where the registrant operates. If there is no regulatory definition, then fresh water shall be considered as water that has a solids (TDS) concentration of less than 1000 mg/l per the Water Quality Association definition.

.20 Recycled water shall include the amount recycled in closed loop and open loop systems as well as recycled produced water or flowback.

- Any volume of water reused multiple times shall be counted as recycled each time it is recycled and reused.

.21 Produced water is defined according to the U.S. EPA (40 CFR 435.41) as water (brine) brought up from the hydrocarbon bearing formation strata during the extraction of oil and gas and can include formation water, injection water, and any chemicals added downhole or during the oil/water separation process.

.22 Flowback is defined as recovered hydraulic fracturing fluid that returns to the surface during a hydraulic fracturing operation that may often be mixed with produced water.

.23 The scope is limited to operations for which the registrant provides hydraulic fracturing, completion, drilling, and/or water management services (e.g., injection of produced water or flowback into a Class II injection well under the U.S. EPA's Underground Injection Control (UIC) program or equivalent, water treatment for reuse in drilling or hydraulic fracturing, reduction of unwanted water in subsurface areas, etc.).

- The scope includes, but is not limited to, water that is used in hydraulic fracturing fluids, drilling fluids, dust control, and drilling cement production.

NR0104-05. Description of strategy or plans to address water consumption and disposal-related risks, opportunities, and impacts

.24 The registrant shall discuss the scope of its strategies, plans, and/or reduction activities, such as whether they pertain differently to different business units, geographies, or water sources.

.25 The registrant shall discuss 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.

.26 The registrant shall discuss demand for specific products, services, and technologies that offer well and field operators reduced water consumption, water recycling, and/or other water impact reductions, and its ability to meet this demand.

.27 The registrant shall discuss its short-term and long-term plans related to water management, where:

- Short-term strategies may include adopting best practices in water recycling or water efficiency initiatives.
- Long-term strategies may include process redesigns or technological innovations that lower withdrawal of fresh water in constrained regions, reduce excess water production from wells, provide new water treatment or recycling systems, etc.

.28 The scope of impact reductions may relate to the following specific areas of water consumption or disposal:

- Hydraulic fracturing fluids
- Drilling fluids
- Dust control
- Cement production
- Produced water or flowback

.29 The registrant shall discuss risks and opportunities it may face relating to: being able to offer its customers services, technologies, or solutions that enhance water use efficiency, treatment and reuse, and reduce water consumption or wastewater production.

Chemicals Management

Description

Oil and gas services companies manufacture drilling and hydraulic fracturing fluids and sell them to E&P companies. While the risk of leaks from a properly drilled well is low, contamination of local water resources can result from contact with hydraulic fracturing fluids and produced water, particularly due to deficiencies in well casings. Concerns about certain chemicals used in hydraulic fracturing fluids have led to fracturing bans, regulation, and legislative proposals to mandate disclosure of chemicals used in some regions, both in the U.S. and abroad. The exact chemical composition of hydraulic fracturing fluids is often proprietary information, and companies compete to create the most effective formulas. In the U.S., some companies are voluntarily disclosing information about the hydraulic fracturing chemicals they use through an industry registry, FracFocus. Under increasing public and regulatory pressure to limit the toxicity of drilling fluid, companies that transparently produce effective, non-hazardous fracking fluids, including formulas that reduce the volumes used per well, may increase their market share and revenues and lower the risk that regulations affect demand for their products.

Accounting Metrics

NR0104-06. Average amount of hydraulic fracturing fluid and proppant consumed per volume of gas or oil extracted

.30 The registrant shall disclose the total volume of hydraulic fracturing fluid (in m3), including water and chemical additives used to open and enlarge fractures within the rock formation, per volume of hydrocarbons extracted.

.31 The registrant shall disclose the amount of proppant (in kilograms) used per volume of hydrocarbons extracted.

.32 Proppant is defined as fine particles (often fine mesh sand or ceramic materials) mixed with fracturing fluid to hold open fractures created during a hydraulic fracturing operation.

.33 The average amounts shall be calculated as the aggregate amount of fluid and proppant consumed, divided by the aggregate amount of gas and/or oil extracted from hydraulically fractured wells (in MMscf and MMbbl, respectively).

.34 The scope includes wells for which the registrant supplies hydraulic fracturing fluids and proppant, regardless of whether it conducts the hydraulic fracturing.

.35 The registrant may choose to provide discussion around how the amount of hydraulic fracturing fluid and proppant used may be influenced by the fracturing technique implemented, independent of the nature of the fluid or proppant and outside of the registrant's control.

NR0104-07. Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used

.36 The registrant shall calculate the percentage as: the number of hydraulically fractured wells for which it provides public disclosure of all of the fracturing fluid's chemical content, divided by the total number of hydraulically fractured wells.

.37 The scope includes wells for which the registrant supplies hydraulic fracturing fluids, regardless of whether it conducts the hydraulic fracturing.

.38 The registrant shall count only wells for which all fluid chemicals are publicly disclosed, including those chemicals that meet the definition of a trade secret according to Appendix E to 29 CFR Part §1910.1200 and may be exempt from disclosure on a material safety data sheet (MSDS).

.39 Public disclosure includes, but is not limited to, posting to a publicly accessible corporate website or fracfocus.org.

NR0104-08. Description of strategy or plans to address chemical-related risks, opportunities, and impacts

.40 The registrant shall discuss the scope of its strategies, activities, and/or management plans, such as whether they pertain differently to different business units, geographies, or types of service.

.41 The registrant shall discuss demand from well operators for specific products, services, and technologies that are related to the amount, type, legal status and/or hazard profile of chemicals used or sold by the registrant, and its ability to meet this demand.

.42 The registrant shall discuss its short-term and long-term plans related to chemicals management, where:

- Short-term strategies may include adopting best practices in chemicals re-use, recycling, or efficiency initiatives, ensuring compliance with local chemicals regulation, providing public disclosure of chemicals used, and participating in initiatives such as Responsible Care and the Global Product Strategy (GPS).
- Long-term strategies may include process redesigns or technological innovations that reduce or eliminate the needs for certain chemicals, replacement of certain chemicals with benign alternatives, or implementation of green chemistry principles in the development of new products and services.

.43 The registrant shall discuss 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.

Ecological Impact Management

Description

Oil and gas extraction activities can have significant impacts on biodiversity and ecosystems, particularly when companies operate in ecologically sensitive areas or have resource-intensive operations, such as oil sands extraction. These can occur through disposal of drilling and associated wastes, well decommissioning, land use, and fuel spills. Producers face regulatory risks from legislation and permitting to protect ecosystems in the U.S. and abroad, and from regulations specifically related to well decommissioning or underground waste injection. Oil and gas services companies that offer cost-effective and efficient production and decommissioning technologies that mitigate impacts on biodiversity by reducing land use, drilling wastes, and spills can lower associated risks for their customers and gain competitive advantage.

Accounting Metrics

NR0104-09. Average disturbed acreage per (1) oil and (2) gas well site

.44 The registrant shall disclose the total acreage of disturbed land per well site, broken down by oil well sites and gas well sites.

.45 The scope includes land in the exploration, development, production, or decommissioning project phase, but is limited to those sites where the registrant provides drilling, completion, fracturing, and/or decommissioning services.

- This disclosure shall be a cumulative total of all currently active sites, recently decommissioned sites, or sites being restored; it is not limited to land newly disturbed during the fiscal year.
- Land shall no longer be considered disturbed once post-closure restoration and remediation efforts are substantially complete (even if monitoring is ongoing).

.46 Disturbed acreage may result from well pads, drilling and production facilities, pipelines, access roads, equipment storage, reserve pits, tailings, produced water impoundments, etc.

NR0104-10. Description of strategy or plan to address risks and opportunities related to ecological impacts from core activities

.47 The registrant shall discuss the scope of its strategies, plans, and/or reduction activities, such as whether they pertain differently to different business units, geographies, or impact sources.

.48 The registrant shall discuss 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.

.49 The registrant shall discuss its short-term and long-term plans related to management of ecological impacts, where:

- Short-term strategies may include efficient use of materials or equipment, use of multi-well pads, and increased production efficiencies that reduce drilling and associated wastes.
- Long-term strategies may include process redesigns, new rig and equipment designs, advances in geological engineering, and further advances in directional and multilateral drilling that require lower land use and

reduce noise and waste generation, natural resource consumption, hazardous chemical usage, ecological and biodiversity impacts, etc.

.50 The scope of impact reductions may relate to the following specific areas of service provision:

- Drilling or completion
- Hydraulic fracturing
- Water management
- Decommissioning

.51 The registrant may choose to provide discussion around technologies and innovations to reduce ecological impacts that allow their customers access to sites that would not normally be accessible due to their ecological sensitivity.

.52 The registrant may choose to provide discussion around specific plans or strategies to reduce ecological impacts in areas with protected conservation status, endangered species habitat, or in areas of unique ecological sensitivity such as the Arctic. Relevant areas in this regard include:

- International Union for Conservation of Nature (IUCN) Protected Areas (categories I-VI).
- Ramsar Wetlands of International Importance.
- UNESCO World Heritage Sites.
- Biosphere Reserves recognized within the framework of UNESCO's Man and the Biosphere (MAB) Programme.
- Natura 2000 sites.
- Sites that meet the IUCN's definition of a protected area: "A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values."
- These sites may be listed in the World Database of Protected Areas (WDPA) and mapped on ProtectedPlanet.net.
- Areas where IUCN Red List of Threatened Species that are classified as Critically Endangered (CR) or Endangered (EN) are extant.
- A species is considered extant in an area if it is a resident, present during breeding or non-breeding season, or if it makes use of the area for passage.

.53 The registrant shall discuss risks and opportunities it may face relating to being able to offer its customers services, technologies, or solutions that lower ecological impacts, including land use and biodiversity impacts.

Health, Safety, and Emergency Management

Description

Workers in the Oil & Gas Services industry face significant health and safety risks due to the harsh working environments and hazards of handling oil and gas. Furthermore, women and minority workers may be at risk, particularly when they operate in regions where they continue to face discrimination. In addition to acute impacts resulting from accidents, workers may develop chronic health conditions, including those caused by silica or dust inhalation, as well as mental health problems. A significant proportion of the workforce at oil and gas drilling sites consists of temporary workers and employees of oil and gas services companies. Health impacts on, and the safety performance of, such workers can affect Services companies directly by influencing worker productivity and costs. Services companies may also be affected indirectly through the impacts that safety incidents or emergencies can have on their E&P customers. Significant releases of hydrocarbons or other hazardous substances as a result of accidents can have wide-ranging negative social and environmental consequences, for which E&P companies can be held liable. E&P companies can, in turn, initiate legal action against oil and gas services companies. Services companies compete on the basis of their reputation and ability to perform activities on a consistently safe basis. Customers evaluate instances of accidents, spills, injuries, and fatalities when considering awarding contracts to services companies. In addition to implementing effective process safety management practices, it is important for a company to develop a culture of safety in order to reduce the probability that accidents and other health and safety incidents will occur. If accidents and other emergencies do occur, companies with a strong safety culture can effectively detect and respond to such incidents. A culture that engages and empowers employees and contractors to work with management and E&P companies in safeguard their own health, safety, and well-being and to prevent accidents is likely to help services companies reduce risks to financial value.

Accounting Metrics

NR0104-11. (1) Total Recordable Injury Rate (TRIR), (2) Fatality Rate, (3) Near Miss Frequency Rate, and (4) Total Vehicle Incident Rate (TVIR) for (a) full-time employees, (b) contract employees, and (c) short-service employees

.54 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.

.55 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.

.56 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.

.57 The registrant shall disclose its total vehicle incident rate (TVIR) according to definitions and guidance from the American Petroleum Institute (API).

.58 The registrant shall disclose its TRIR, Fatality Rate, and NMFR for each of the following categories of employee:

- Direct, full-time employees
- Contract employees
- Short-service employees (full-time and contract)

.59 Short-Service Employee (SSE) is defined as a newly placed full-time or temporary employee or subcontractor with less than six months' experience in an assigned job.

.60 The scope includes all employees, both domestic and foreign.

.61 Rates shall be calculated as: (statistic count / total hours worked)*200,000.

NR0104-12. Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and project lifecycle

.62 Discussion shall include how the registrant integrates a culture of safety and emergency preparedness throughout its value chain, such as through training, joint management by the workforce and leadership, rules and guidelines, and use of technology.

.63 The registrant shall include a description of how emergency preparedness is coordinated amongst business partners (e.g., contractors and sub-contractors).

.64 Disclosure may focus broadly on safety and emergency management systems, but shall specifically address the systems to avoid and manage emergencies, accidents, and incidents that could have catastrophic human health, local community, and environmental impacts.

.65 Project lifecycle may include one or more of the following stages: geological and seismic surveys, site surveys, exploratory drilling, appraisal drilling, site development, production, and decommissioning.

Business Ethics & Payments Transparency

Description

With operations across the globe, oil and gas services companies interact with many government and local officials, either directly or through agents, in order to secure contracts with state-owned oil companies and multinational corporations. Bribery and corruption are common in some regions, and in others, taxes and other payments to governments may not be used for the benefit of the local population. Enforcement of anti-corruption, anti-bribery, and payments-transparency laws and initiatives in the U.S. and abroad could lead to significant one-time costs or higher ongoing costs, and could even affect a company's social license to operate. Oil and gas services companies are under pressure to ensure that their governance structures and practices can address corruption, willful or unintentional participation in illegal or unethical payments and gifts to government officials or private persons, or the risk of otherwise unfairly influencing these individuals. Operating in corruption-prone countries can exacerbate these risks.

Accounting Metrics

NR0104-13. Amount of net revenue in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index

.66 The registrant shall disclose its net revenue (in U.S. dollars) from activities located in the countries with the 20 lowest rankings in Transparency International's Corruption Perception Index (CPI).

- The 20 lowest numerical ranks shall be used to generate the scope of countries; therefore, due to the fact that multiple countries share many ranks, the scope may include more than 20 countries.

.67 The registrant shall use the most current version of the CPI via Transparency International's publicly accessible website.

.68 The registrant may choose to provide discussion around operations that are located in countries with low rankings in the index but present low business ethics risks; the registrant may choose to provide similar discussion for operations located in countries that do not have one of the 20 lowest rankings in the index but that present unique or high business ethics risks.

NR0104-14. Description of the management system for prevention of corruption and bribery throughout the value chain

.69 The registrant shall discuss its management system and due diligence procedures for assessing and managing corruption and bribery risks internally and associated with business partners in its value chain.

- Relevant business partners include customers, suppliers, contractors, subcontractors, and JV partners.

.70 Relevant aspects of a management system include: employee awareness programs, internal mechanisms for reporting and following up on suspected violations, anti-corruption policies, and participation in the Extractive Industry Transparency Initiative (EITI).

.71 The registrant may choose to discuss the implementation of one or more of the following:

- Key Organization for Economic Co-operation and Development (OECD) guidelines
- International Chamber of Commerce (ICC): Rules of Conduct against Extortion and Bribery
- Transparency International: Business Principles for Countering Bribery
- United Nations Global Compact: 10th Principle
- World Economic Forum (WEF): Partnering Against Corruption Initiative (PACI)

Management of the Legal & Regulatory Environment

Description

The interaction of companies in the Oil & Gas Services industry with their legal and regulatory environment can have material impacts on shareholder value. This can be a result of oil and gas services companies' significant spending lobbying and political contributions or 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 that affects their business, or incurring 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 clear strategy for engaging policymakers and regulators that accounts for societal externalities and is aligned with their goals and activities for long-term sustainable outcomes could benefit from a stronger long-term license to operate. Such companies will likely be better prepared for medium- to long-term regulatory adjustments to deal with high-impact issues such as climate change and water scarcity and contamination.

Accounting Metrics

NR0104-15. Amount of political campaign spending, lobbying expenditures, and contributions to tax-exempt groups including trade associations

.72 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.

.73 The scope of disclosure includes the following:

- Political spending, which 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; and
- 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.

NR0104-16. Five largest political, lobbying, or tax-exempt group expenditures

.74 The registrant shall disclose the recipients of its five largest contributions disclosed in NR0104-15, 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.

.75 The registrant shall disclose the amount (in U.S. dollars) contributed to each individual, organization, ballot measure, or lobbying issue topic.

.76 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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