EXTRACTIVES & MINERALS PROCESSING SECTOR

BASIS FOR CONCLUSIONS

Metals & Mining

Sustainable Industry Classification System® (SICS®) EM-MM

Prepared by the
Sustainability Accounting Standards Board

October 2018

sasb.org

About SASB

The SASB Foundation was founded in 2011 as a not-for-profit, independent standards-setting organization. The SASB Foundation's mission is to establish and maintain industry-specific standards that assist companies in disclosing financially material, decision-useful sustainability information to investors.

The SASB Foundation operates in a governance structure similar to the structure adopted by other internationally recognized bodies that set standards for disclosure to investors, including the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB). This structure includes a board of directors ("the Foundation Board") and a standards-setting board ("the Standards Board" or "the SASB"). The Standards Board develops, issues, and maintains the SASB standards. The Foundation Board oversees the strategy, finances and operations of the entire organization, and appoints the members of the Standards Board.

The Foundation Board is not involved in setting standards, but is responsible for overseeing the Standards Board's compliance with the organization's due process requirements. As set out in the SASB Rules of Procedure, the SASB's standards-setting activities are transparent and follow careful due process, including extensive consultation with companies, investors, and relevant experts.

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Introduction

The publication of the Sustainability Accounting Standard ("Standard") for the Metals & Mining Industry marks an important milestone for the industry and for global capital markets more generally. It is the first Standard designed to assist companies in the Metals & Mining industry in disclosing financially material, decision-useful sustainability information to investors.

The Metals & Mining Industry Standard was first released in a provisional form in June 2015 after an extensive standard-setting process. Following the release of the Provisional Standard, the SASB staff, under the guidance of the SASB standard-setting board ("the Standards Board" or "the SASB"), engaged in further due process to revise the Standard. In October 2018, the Standards Board approved revisions to the Standard. The Standards Board subsequently voted to approve the Metals & Mining Industry Standard, thereby including it in as one of the 77 industries for which the SASB has developed and published an industry standard.

The *Basis for Conclusions* describes the rationale for revisions made to the provisional industry standard. Additionally, the document outlines the standard-setting process the Standards Board used to codify the standard. All standard-setting documentation, including prior drafts of the standard, summary reports, and comment letters, which informed the development of the standard, are publicly available at the Standard Setting Archive of the SASB website.

The Standards Board

The Standards Board is charged with developing, issuing, and maintaining SASB standards. The Standards Board operates in accordance with its primary governance documents, including the SASB's *Conceptual Framework* and *Rules of Procedure*. The *Conceptual Framework* sets out the basic concepts, principles, definitions, and objectives that guide the Standards Board in its approach to setting standards. The *Rules of Procedure* establishes the due process followed by the Standards Board and staff in their standard-setting activities. The standard-setting process is designed to ensure each industry standard reflects the core objectives established in the *Conceptual Framework* to facilitate companies' cost-effective reporting of financially material and decision-useful sustainability information to investors.

In its standard-setting role, the Standards Board operates in a transparent manner, including holding public board meetings. The Standards Board currently uses a sector-based committee structure, with three Standards Board members assigned primary responsibility for each given sector. In addition to sector committee reviews, the full Standards Board evaluates revisions to the standards. Information on Standards Board meetings, including minutes, agendas, and a schedule of upcoming meetings is available on the SASB website. A list of Standards Board members and their respective sector committee assignments is included in **Appendix A**.

Development of the Sustainability Accounting Standards

SASB staff initiated its standard-setting activities in 2012 under the oversight of the Standards Council.[1] From August 2012 to March 2016, the SASB staff developed provisional standards for each of the industries identified in the Sustainable Industry Classification System® (SICS®).[2] The provisional standards were developed through an iterative

[1] The Standards Council served in a process oversight role, distinct from the standard-setting role the Standards Board serves in. Upon completion of the provisional phase in 2016, the Standards Council was disbanded.

[2] At the time of the development of the provisional standards, SICS® contained 79 industries. SICS® was subsequently revised to 77 industries as a result of the combining of industries that contained similar sustainability-related risk and opportunity characteristics.

and transparent process centered on independent research, market input, and oversight from the Standards Council. Each provisional industry standard was developed based on staff research, industry working group ("IWG") feedback, public comments, and individual consultations with companies, investors, and other relevant experts. Throughout the development of the provisional standards, more than 2,800 individuals participated in IWGs, 172 public comment letters were received, and hundreds of individual consultations were conducted with market participants by the SASB staff.

In 2016, following the issuance of the provisional standards across all industries, the SASB staff initiated a dedicated market consultation period to gain further insight into market views on the provisional standards. Subsequently, the Standards Board was seated and initiated a due process phase that culminated in the codification of 77 industry standards in October 2018. This standard-setting phase that began with the provisional standards and concluded with the codified standards is described more fully below. All standard-setting documentation discussed below are publicly available at the Standard Setting Archive of the SASB website.

- **Consultation:** In the six-month period from Q4 2016 – Q1 2017, the SASB staff conducted consultations to gather additional input from companies, investors, and relevant experts on the provisional standards. Throughout this phase, the SASB staff received input on the complete set of industry standards from individual consultations conducted with 141 companies, 19 industry associations, and 271 investor consultations via 38 institutional investors. The *Consultation Summary* comprises the findings from the consultations.

- **Technical Agenda:** In July 2017, after a period of review to evaluate market input from consultations on the provisional standards, the Standards Board worked with the SASB staff to publish the *Technical Agenda*. The *Technical Agenda* formally lists the areas of focus to address in preparing the standards for codification, emphasizing those issues for which strong evidence surfaced and/or those which received significant market feedback during the consultation period.

- **Public Comment Period:** In October 2017, the Standards Board published exposure drafts of the standards, which incorporated proposed changes guided by the *Technical Agenda* to the provisional standards. This opened a 90-day period, subsequently extended to a 120-day period, from October 2017 to January 2018, for public comment and review of proposed changes to provisional standards. Market participants provided 120 comment letters during the comment period. All letters received and a *Summary of Public Comments* are available at the Standard Setting Archive.

The Standards Board and the SASB staff evaluated the public comments received in conjunction with previous market input and research to determine the revisions to be made to the provisional standard.

Approval of the Industry Standard

On October 13, 2018, the Standards Board voted unanimously to revise the Provisional Standard for the Metals & Mining industry. In light of these revisions, on October 16, 2018, the Standards Board voted unanimously in favor of removing this Standard's provisional status. In doing so, the Standards Board considered all phases of the standard-setting process, including those detailed in the above documents, to assess their underlying rationale, their adherence to due process, and their faithfulness to the essential concepts of sustainability accounting, as described in the *Conceptual Framework*.

The following section of this document describes the rationale for the revisions. **Appendix B** contains a redline table that summarizes these revisions. Revisions relative to the provisional standard that have not altered the scope or content of disclosure topics or metrics, such as those that are intended to improve the consistency, clarity, and accuracy of the standard, are not specifically addressed in the *Basis for Conclusions*.

Future Updates to the Standards

As social, economic, regulatory, and other developments alter an industry's competitive landscape, the SASB standards may need to evolve to reflect new market dynamics. The Standards Board will follow a regular standards review cycle to address emerging and evolving issues that may result in updates to the SASB standards.

The Standards Board intends to direct the SASB staff to compile and publish a *Research Agenda*, which outlines items that have been identified as requiring further analysis. Evidence-based research and market input, including feedback from outreach and consultation, will inform reviews of issues on the *Research Agenda*. Items from the *Research Agenda* may later be added to the Standards Board's *Technical Agenda* for additional due process and formal deliberation. All updates are subject to the standard-setting process described in the *Rules of Procedure*.

Revision EM-MM:01 – **Industry:** Metals & Mining; **Topic Name:** Water Management

2017 Technical Agenda Item #4-28 Description

The SASB is evaluating the revision of the technical protocol associated with metric NR0302-05[3] to improve its completeness.

Summary of Change – Revise Metric

The SASB revised the provisional metric NR0302-05 from "Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress," to "(1) Total fresh water withdrawn, (2) total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress," and additionally revised the technical protocol to include the disclosure of which facilities are located in areas of High or Extremely High water stress.

Adherence to Criteria for Accounting Metrics

The Metals & Mining Industry Provisional Industry Standard includes a topic for Water Management with two associated metrics that describe company exposure to risks associated with water consumption as well as water effluents. Specifically, provisional metric NR0302-05 recommended that companies disclose the total fresh water withdrawn, the amount recycled, and the amount that was withdrawn from regions of High or Extremely High water stress. While this indicator was useful and representative of company exposure to risks associated with the water management topic, the provisional metric did not provide a representative indicator of the most material aspects of water management risk. Specifically, the metric omitted water consumption, a critical element to understanding a company's net impact to available water resources. Additionally, the inclusion of water recycling as an element of disclosure did not provide a fully representative view of company strategies to manage water-related risk. The revision of the metric to replace the volume of water recycled with that which was consumed improves the completeness, representativeness, and alignment with existing industry-specific reporting guidance, thereby better accomplishing the core objectives of the standard by offering investors a more decision-useful set of disclosures that are simultaneously more cost-effective for companies.

In addition, the provisional technical protocol defined how areas of High or Extremely High water stress should be identified, but did not indicate the extent of company operations in these areas. The revision added an element to the technical protocol whereby companies will disclose those facilities located in areas of High or Extremely High water stress, thereby improving the completeness of the technical protocol and ultimately, better accomplishing the core objective of the standard by improving the decision-usefulness of the disclosure.

Supporting Analysis

Water management is an important factor for companies in the industry, who may be exposed to risks related to water management that include dependence on water as an input to production or the provision of services, the reliability of water access to support business operations, and the treatment and disposal of water used in business

[3] The provisional version of this metric was NR0302-05 – Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress.

processes. Company management's ability to proactively identify and mitigate such risks or capture associated opportunities can therefore result in material financial impacts.

Key aspects of water management include both consumptive and non-consumptive use. Non-consumptive water use is primarily impacted by factors relating to water access and aggregate withdrawals, and provides a relevant and representative indicator of risk due to the potential for a company's operations to be adversely affected by the limited ability to withdraw water, either due to physical or legal (rights) factors. Consumptive use is an important factor stemming from changes to the total amount of water available to all users in a water basin. Water consumption[4], measures the net difference between water withdrawals and what is discharged into the environment or to a third party at the end of production processes, thereby providing investors with a more complete view of how water intensive a company's operations are.

Risks related to both water access and consumption are further exacerbated by elevated water stress and/or scarcity. Water access and use in such regions may result in a higher risk of operational curtailment due to inadequate water availability. Furthermore, water stressed regions may be more exposed to increasing water prices over the medium- to long-term.[5] As such, the measurement of the percent of water withdrawals and consumption in areas of water stress was maintained for both water withdrawals and water consumption.

While the revised metric incorporates water consumption, the element of the provisional metric that captures the volume of water recycled has been eliminated. Water recycling is one strategy that companies can use to mitigate risks associated with water use, though this is not the only strategy or always an applicable strategy. Other strategies include efforts to use water more efficiently, minimize water losses, and the substitution of water use with other inputs.[6] As such, the inclusion of the amount of water recycled in the provisional metric did not provide a representative or complete picture of a company's efforts to manage performance on water use. As noted previously, such risk is better characterized by water withdrawal, consumption, and the percentage of each in areas of high water stress.

In a review of existing company disclosures in voluntary sustainability reports of seven of the largest companies in the industry revealed that 85 percent report water use, 43 percent report water withdrawals, and 71 percent reported some form of re-use or recycling. However, definitions for the re-use or recycling of water varied between reports, making the comparability of such information challenging. Of the water usage and water withdrawal numbers, there appears to be inconsistent use of the terms "withdrawal" versus "use," for which the SASB Standard would provide a clear definition to facilitate accurate reporting of each.

In its publication *A practical guide to consistent water reporting*, the International Council on Metals and Mining (ICMM) refers to several standardized water reporting metrics:

- Withdrawal - the volume of water received by the site or operational facility from the water environment and/or a third-party supplier

[4] Water consumption is defined as water that is evaporated, incorporated into products, or otherwise not returned to the same catchment basin from which it was withdrawn.

[5] Freyman, Monika, et al, "An Investor Handbook for Water Risk Integration," Ceres, March 2015, accessed June 6, 2018, https://riacanada.ca/wp-content/uploads/2015/04/Ceres-Investor-Water-Handbook.pdf.

[6] The World Resources Institute, "Aqueduct water risk framework," working paper, January 2013, accessed June 6, 2018, http://www.wri.org/sites/default/files/aqueduct_water_risk_framework.pdf.

- Discharge – the volume of water removed from the site or operational facility to the water environment and/or a third-party supplier

- Efficiency – the proportion of water reused and recycled by the site to reduce overall consumptive water demand

- Consumption – the volume of water used by the site and not returned to the water environment or a third party

With respect to water withdrawal and discharge, the ICMM report notes that such information should be disclosed as it is a "key [metric] in defining a site's water dependency and the potential associated water risks (physical, reputational or regulatory) and opportunities." With respect to water consumption, the ICMM report notes that it is "a key metric in understanding a site's water dependency, use and associated risks. Also, it provides insight into the opportunity to use of lower quality water to meet the site water demand and reduce consumptive use of high quality water." With respect to reporting "Interactions with water," the ICMM report specifically recommends the reporting of "company-wide withdrawal, discharge, and consumption values." As such, the revision of the metric to include water withdrawn and water consumed provides these key data sources with respect to the material aspects of water-related risks included in the standard related to use of water resources. It is noted that aspects of risk associated with water effluents is captured under metric EM0302-06, which includes the number of incidents of non-compliance with water-quality permits, standards, or regulations.

While the importance of water stress as an element of overall water management risk is emphasized in the existing metric, the associated financial impacts are often associated with localized, facility-specific factors. The industry research brief prepared by SASB provides evidence in support of this conclusion, referencing a $200 million investment in larger water reservoirs required by Peru for a mining company to re-secure its mining lease as well as the $3.4 billion desalinization plant being built by another mining company as part of its Atacama project. More recent examples include the cessation of operations at a mining company's Maricunga mine following a ruling by the Chilean environmental protection agency due to concerns about adverse impacts to local water resources as well as the $2.4 billion desalination and power plant associated with the a bauxite mine joint venture in Saudi Arabia. In a much broader indication of the criticality of water management risk, the World Economic Forum highlighted "water crisis" as a top-5 risk in terms of impact from 2012-2017 in its Global Risks Report[7].

Other disclosure frameworks recognize the importance of localized water risk. In its Water Questionnaire, CDP's element W1.4a asks companies to disclose "detrimental impacts experienced by your organization related to water in the reporting year" with reporting elements including the country, river basin, length of impact, and financial implications. The World Resource Institute's Aqueduct tool provides water risk assessments for companies based on the location of a company's facility as well as the nature of its business.

In addition, the International Council on Mining and Metals (ICMM), whose membership consists of major Metals & Mining organizations, provided guidance for member organizations in its Practical Guide to Consistent Water Reporting. In the Guide, the report suggests "the company-wide [water] dataset may be analyzed and used in many different ways" and offers one such way as, "to identify . . . sites associated with significant water risks when reporting via CDP."

[7] World Economic Forum, The Global Risks Report 2017, 12th Edition, 2017

To emphasize the localized nature of water risk to the Metal and Mining industry, which typically features large, capital intensive mining development projects that are subject to localized environmental risk factors, the technical protocol will be revised to include the identification of facilities located in areas of high or very high water stress. An analysis of regulatory filings of the five largest integrated metals and mining companies by market capitalization showed that all five disclose the geographic location of their facilities. This suggests that the reporting burden associated with the identification of specific facilities is likely to be relatively small. This revision improves the completeness of the disclosure in providing decision-useful information to investors when assessing company exposure to and management of water-related risks and opportunities.

Market Input

Investors: Investors emphasized that this risk is material at the asset level and disclosures that provide a more accurate view of the localized nature of water management risk would be decision-useful. Some investors noted the usefulness of granular disclosure of water usage at the asset-level, while others noted that aggregate data indicating the proportion of assets in water-stressed regions may be sufficient to understand associated risks.

Companies: Companies expressed concerns regarding the provisional definitions of water consumption and recycling in the standard, suggesting that these defections were insufficient to ensure that companies would disclose comparable, representative data. Companies also suggested that this risk is best understood at a localized level, especially with respect to withdrawals from areas of high water stress. Feedback suggests that such withdrawals carry additional risks and costs, including supply disruptions and elevated costs to acquire or desalinate water from non-fresh water sources. Companies noted a concern that the provisional aggregate, corporate-level disclosure basis may obfuscate management strategies to mitigate water-related risks at specific mine sites in water-stressed regions. It was also suggested that disclosures related to the localized nature of these risks be harmonized with existing reporting frameworks and/or be aligned with existing industry practice for tracking and managing operational water usage to minimize the cost burden associated with reporting.

Others: Third parties emphasized the highly localized nature of water management risk and the importance of asset-specific disclosures.

Benefits

Improves the SASB Standard: The revised technical protocol emphasizes the localized nature of water scarcity risk for the Metals & Mining industry.

Improves decision-usefulness: Updating the technical protocol to include facilities located in areas of high water stress as well as company strategies for mitigating this risk provides investors with a more complete, representative, and comparable view of water management risk.

Revision EM-MM:02 – **Industry:** Metals & Mining; **Topic Name:** Water Management

2017 Technical Agenda Item #4-29 Description

The SASB is evaluating revisions to the water quality metric NR0302-06[8] to improve its decision-usefulness.

Summary of Change – Revise Technical Protocol

The SASB revised the technical protocol for metric NR0302-06, "Number of incidents of non-compliance associated with water-quality permits, standards, and regulations," to limit the scope of incidents of non-compliance to exclusively those that result in a formal enforcement action.

Adherence to Attributes of Technical Protocols

The Metals & Mining Industry Provisional Standard includes a disclosure topic, Water Management, that is centered on corporate performance and strategy concerning water-related risks and opportunities. The provisional metrics associated with the topic focus on water consumption, water scarcity, effluents, and regulatory compliance. More specifically, provisional metric NR0302-06 was designed to capture a company's performance on complying with state- or federal-level water quality regulations, including regulations on water treatment and discharges. Performance on incidents of non-compliance are an indication of the strength of a company's overall water quality management, its ability to comply with regulation, and its exposure to potential operational impacts associated with non-compliance. This includes costs related to permitting, penalties, remediation, and capital expenditures. However, the provisional metric scope, as defined in the technical protocol, was excessively broad as it stated, "[a]n incident of non-compliance shall be disclosed regardless of whether it resulted in an enforcement action (e.g., fine, warning letter, etc.)." Incidents of non-compliance vary widely in terms of the nature and severity of impact, and they may or may not result in enforcement actions.

Given the broadly defined scope of non-compliance incidents, the provisional metric did not provide fair representation of corporate performance on the topic and it is less likely to be cost-effective. The revised technical protocol limits the scope of non-compliance incidents exclusively to those that result in formal enforcement actions—ultimately, improving the signal-to-noise ratio by focusing on those incidents more likely to indicate operational or financial impacts. This revision improves the representativeness and cost-effectiveness of the metric, as well as the comparability and usefulness of the information it generates.

Supporting Analysis

Water regulations in the U.S., Canada, and many international regions typically address the quality of water discharges from manufacturing facilities. Water-intensive industries, such as Metals & Mining, may also be affected by state or federal regulations that address water withdrawals. However, this is less common than regulations governing water discharges. Companies are generally required to obtain state- or federal-level permits that allow them to discharge certain amount of wastewater over a given period. Incidents of non-compliance with water regulations may be the result of a variety of events relating to water quality management, including the failure to meet a reporting deadline or a water discharge above permit limits. The magnitude of the regulatory response will vary depending on

[8] The provisional version of this metric was NR0302-06 – Number of incidents of non-compliance with water quality permits, standards, and regulations

the nature of the non-compliance. For example, failure to meet a reporting deadline may result in a non-compliance notice or warning letter with little to no financial impact for the company. An effluent regulation exceedance could, however, result in a company being issued a formal enforcement action, resulting in remediation costs, fines, and/or reputational damage.

Formal enforcement actions, as defined[9] by the EPA and some state agencies, are statutorily recognized actions to address a violation or threatened violation of water regulations, regulations, policy, or orders, and include administrative penalty orders, administrative orders, and judicial actions, among others. These types of enforcement actions can result in financial penalties and remediation requirements and over time can be indicative of overall management of water issues. Conversely, non-compliance incidents that result in informal enforcement actions may be issued when no actual violation has occurred and are significantly less likely to generate financial impacts for companies. Examples include an inspection, phone call, or violation letter. Correspondingly, formal enforcement actions are less common than informal actions. According to EPA data, of 5,102 U.S. facilities that received notices of non-compliance with water regulation, only 519 resulted in formal enforcement actions.[10]

The provisional metric required reporting of incidents of non-compliance regardless of whether they result in a formal enforcement action. Reporting all incidents of non-compliance did not distinguish between the severity of incidents and the resulting potential for financial impacts to the registrant. This creates an undue cost burden for the registrant related to data collection, tracking, and reporting. It also adversely affected the usefulness and fair representation of the resulting disclosures.

As incidents that result in formal enforcement actions are more likely to generate financial impacts on the registrant, they are a relevant indicator of performance on the management of water quality. Thus, the revision confines the metric's scope to incidents that result in formal enforcement actions. It thereby directly improves the representativeness, comparability, and usefulness of the information generated by the Standard, and better adheres to the core objectives of the Standard.

Additionally, the revised SASB metric is aligned with federal and state water quality regulations that employ formal enforcement actions as well as reporting guidelines such as the CDP Water Information Request.

Market Input

Investors: A limited number of investors provided input on the revision. Such input broadly supported the revision, based on improvements to the decision-usefulness of resulting disclosures.

Companies: A limited number of companies provided input on the revision. Such input constituted support for revising the scope of this metric to focus on notices of violation that result in formal enforcement actions, as doing so improves the decision-usefulness of the metric.

Others: Several subject matter experts commented that the revision more accurately reflects performance on the aspect of the topic related to regulatory compliance.

[9] "Informal and Formal Actions, Summary of Guidance and Portrayal on EPA Websites," United States Environmental Protection Agency, last modified July 1, 2010, accessed July 10, 2018, https://www.epa.gov/sites/production/files/2013-11/documents/actiondefs.pdf.

[10] "Analyze Trends: State Water Dashboard," United States Environmental Protection Agency, last modified March 20, 2017, accessed June 20, 2018, https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard?view=performance&state=National.

Benefits

Improves the SASB Standard: The revision results in disclosures more consistent with the guiding criteria of fair representation and comparability.

Improves decision-usefulness: By focusing on incidents of non-compliance that resulted in formal enforcement actions, the revision improves the usefulness of information generated by the Standard as it improves the signal-to-noise ratio.

Improves cost-effectiveness: The revision narrows the scope of disclosure to a more specific (and meaningful) subset of non-compliance incidents, thereby improving the cost-effectiveness of the Standard.

Improves alignment: The revision aligns the SASB Standard with existing reporting protocols and regulatory reporting requirements.

Revision EM-MM:03 – **Industry:** Metals & Mining; **Topic Name:** Security, Human Rights, and the Rights of Indigenous Peoples

2017 Technical Agenda Item #4-30 Description

The SASB is evaluating the revision of the technical protocol associated with metric NR0302-16[11] to improve its measurability.

Summary of Change – Revise Technical Protocol

The SASB revised the technical protocol for provisional metric NR0302-16 to include a reference to the United Nations Declaration on the Rights of Indigenous Peoples and the International Labour Organization (ILO) with respect to the identification of indigenous peoples.

Adherence to Attributes of Technical Protocols

The Metals & Mining Industry Provisional Standard includes a topic for Security, Human Rights, and the Rights of Indigenous Peoples with three associated provisional metrics that describe company exposure to and management of associated risks and opportunities. Specifically, provisional metric NR0302-16 specifies that companies should disclose proved and probable reserves in or near indigenous lands. The technical protocol notes that "indigenous lands are those occupied by those who self-identify as indigenous" as well as a reference to a United Nations working definition of indigenous peoples. While the provisional technical protocol provided relevant, measurable, and complete guidance, it did not explicitly refer to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and/or the ILO Convention No. 169, which includes "self-identification" as a criterion for identifying Indigenous groups. To address this, the technical protocol was revised to reference these frameworks to ensure the objectivity of associated disclosures.

Supporting Analysis

In order to ensure objectivity with respect to the identification of indigenous peoples for the purposes of company disclosures related to metric NR0302-16, the standard was modified to directly reference UNDRIP as well as the ILO Convention No. 169. The UNDRIP notes in Article 33 that "Indigenous peoples have the right to determine their own identity or membership in accordance with their customs and traditions. This does not impair the right of indigenous individuals to obtain citizenship of the States in which they live." The ILO Convention No. 169 notes in Article 1, Section 2 that, "Self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply." The International Council on Metals and Mining (ICMM), an international organization dedicated to a safe, fair and sustainable mining industry, states as one of its Principles that member organizations must, "respect human rights and the interests, cultures, customs, and values of employees and communities affected by our activities," and further commits to, "respect the culture, customs, and heritage of local communities, including indigenous peoples." The ICMM prepared additional guidance in its Indigenous Peoples and Mining Good Practice Guide, which notes, "The designation of "indigenous peoples" has come to be recognized over the last few decades as a particular demographic category under international law through instruments such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) …." To

[11] NR0302-16 - (1) Proven and (2) probable reserves in or near indigenous land

ensure SASB is aligned with these internationally recognized organizations and therefore provides an objective definition for the identification of indigenous peoples, the technical protocol was revised to directly refer to the UN and ILO frameworks.

Market Input

Investors: Multiple investors were supportive of SASB's process to define technical protocols that are objective and relevant to the subject matter.

Companies: Multiple companies across the sector expressed concerns regarding the identification of groups as "indigenous peoples" as challenging due to the lack of a universally accepted definition of the term.

Benefits

Improves the SASB Standard: This modification clarifies the technical protocol by referencing internationally recognized frameworks whereby a company can determine the scope of reserves included on a disclosure basis, thereby improving the objectivity of associated disclosures.

Revision EM-MM:04 – **Industry:** Metals & Mining; **Topic Name:** Security, Human Rights, and the Rights of Indigenous Peoples

Summary of Change – Revise Technical Protocol

The SASB modified the technical protocol for metric NR0302-17 to include the disclosure of company governance processes for issues related to the topic, as well as its policies and practices related to the establishment of community agreements and project grievance mechanisms, where applicable.

Adherence to Attributes of Technical Protocols

The Metals & Mining Industry Provisional Standard includes a topic for Security, Human Rights, and the Rights of Indigenous Peoples with three associated provisional metrics that described the extent of a company's assets that are located in or near indigenous lands or areas of conflict as well as a discussion of a company's approach to managing such issues. With respect to the latter, provisional metric NR0302-14 specifies that companies should disclose their engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict. While the provisional technical protocol included relevant guidance, it failed to include a complete and representative list of strategies that companies can employ to manage risks related to the topic, including its governance practices the establishment of community agreements, and the establishment of project grievance mechanisms. As such, the technical protocol was revised to include these elements within the scope of disclosure, when deemed relevant by the company. Such inclusion improves the completeness of the technical protocol, ensuring that associated disclosures by companies provide a complete and representative view of company actions to manage topic-level risks.

Supporting Analysis

Companies in the Metals & Mining industry can employ a number of factors to manage issues related to Human Rights and the Rights of Indigenous Peoples in the areas in which they operate. While the provisional technical protocol included a number of relevant external frameworks that the company can apply to manage such issues, including International Labour Organization Conventions, the use of free, prior, and informed consent, and the implementation of the Voluntary Principles on Security and Human Rights, it failed to include additional specific elements that companies in the Metals & Mining industry can employ to manage risks related to Human Rights and the Rights of Indigenous Peoples. Such elements included governance mechanisms that a company may employ to ensure policies related to human rights are being executed throughout the organization, the establishment of formal community agreements that describe how a company will engage and interact with peoples impacted by a company's operations, and finally, the establishment of project grievance mechanisms for such peoples to raise issues or concerns and have them addressed and resolved. To better recognize company efforts to manage the issue through the application of these policies and practices, the technical protocol was revised to include these elements to facilitate associated disclosure by companies, when the company deems such disclosure to be relevant.

These additional disclosure elements are aligned with existing industry guidance related to the topic. Specifically, the International Council on Metals and Mining (ICMM) has established general guidance related to Handling and Resolving Local Level Concerns & Grievances and specific guidance related to Indigenous Peoples in its Indigenous peoples and mining position statement. Additionally, the ICMM's comprehensive Good Practice Guide on Indigenous

Peoples and Mining establishes guidance with respect to the formation of agreements with Indigenous Peoples as well as mechanisms for handling grievances. Finally, the ICMM's Principle # 1 establishes the importance of corporate governance in ensuring sustainable development.

In their voluntary sustainability reports, six major companies in the Metals & Mining industry all describe policies or examples related to corporate governance, consultation, the formation of agreements, and/or the establishment of grievance mechanisms with indigenous groups as part of their management strategy related to the issue. As evidenced by the diversity of strategies employed in company disclosures, such strategies can vary significantly depending on the nature of the communities in which the company has operations. As such, disclosures associated with the revised technical protocol will vary by company, resulting in distributive, comparable disclosures that are decision-useful for investors.

As such, the discussion and analysis metric has been revised to include the provisional for companies to disclose their governance strategy for topic-level issues, as well as its approach to establishing community agreements and/or project grievance mechanisms, when such disclosures are deemed relevant by the company. The addition of these disclosure elements allows for a more complete, comparable disclosure, whereby companies who have implemented such policies and strategies can disclose such information to investors in a standardized, comparable manner.

Market Input

Investors: Multiple investors were supportive of SASB's process to define technical protocols that are objective and relevant to the subject matter.

Companies: Companies did not provide direct feedback on the revision to the Standard; however, companies were generally supportive of revisions that enhanced the representativeness of the standard without adversely impacting the cost-effectiveness.

Benefits

Improves the SASB Standard: This revision enhances the completeness of the technical protocol by including additional policies and practices that companies may employ to manage risks related to security, human rights, and the rights of indigenous peoples.

Revision EM-MM:05 – **Industry:** Metals & Mining; **Topic Name:** Community Relations

Summary of Change – Revise Technical Protocol

The SASB modified the technical protocol for provisional metric NR0302-13[12] to include "natural resource governance" as an example of a discussion topic that companies should consider when discussing country, regional, or community risks.

Adherence to Attributes of Technical Protocols

The Metals & Mining Industry Provisional Standard includes a topic for Community Relations with two associated provisional metrics that described the interaction between a company's operations and the local communities in which it does business. Provisional metric NR0302-13, associated with the topic, specifies that companies should disclose their processes to manage risks and opportunities associated with community rights and interests. The provisional technical protocol included guidance related to the types of issues companies should consider when preparing their disclosures, including economic, environmental, social, and cultural rights and interests. While the provisional technical protocol provided relevant and measurable guidance, it may not have offered fully complete guidance with respect to the types of issues the registrant should consider when making its disclosure. Specifically, a consideration of "natural resource governance" was not included in the scope of possible disclosures. Therefore, to improve the scope of disclosure, this element has been added to the technical protocol.

Supporting Analysis

The Community Relations topic describes company interactions with local communities in the course of conducting company business. In the Metals & Mining industry, such impacts can include economic, environmental, social, and cultural implications. With respect to economic rights and interests, the provisional technical protocol associated with the metric included guidance that suggested that companies should discuss factors such as the right to employment, fair wages, payment transparency, and respect of infrastructure and agricultural land.

An important aspect of community economic interests include company policies with respect to natural resource governance. The International Council on Mining & Metals (ICMM) includes specific guidance with respect to the "governance and transparency issue," noting that "governance is a term commonly used to refer to how public institutions and private companies conduct their affairs and manage resources" and that "transparency and accountability are central to the concept of good governance." Further, "disclosure information and transparent decision-making processes enable citizens and other stakeholders to scrutinise actions and hold governments or companies to account."

Pursuant to the ICMM guidance, several leading companies in the Metals & Mining industry all disclose information related to natural resource governance in the context of their management of community relations. For example, one company notes its social and economic impact assessments and collaboration "with local communities to develop clear and transparent agreements, which are essential to providing access to land we require for directing benefits to those affected by our activities." Another company discusses a commitment to "fostering ethical and transparent relations with local government, the community and the market." A third company notes its "robust governance

[12] The provisional version of this metric was NR0302-13 – Discussion of process to manage risks and opportunities associated with community rights and interests.

frameworks and community partner due diligence for social investment activities." As such, a discussion of natural resource governance is aligned with existing corporate reporting practices and, as evidenced by such disclosures, is an important factor when understanding a company's overall approach to managing community relations.

In recognition of the role that natural resource governance plays in the management of community relations, this item has been added to the technical protocol as an element companies should consider when preparing their disclosures associated with the metric. The revision therefore facilities a more complete, representative disclosure of company efforts to manage risks and opportunities associated with the Community Relations topic, thereby improving the quality of the information generated by the standard.

Market Input

Investors: Multiple investors were supportive of SASB's process to define technical protocols that are objective and relevant to the subject matter.

Others: A third party recommended several revisions to the technical protocol related to the Extractives Industry Transparency Initiative, the UN Principles for Responsible Contracts, and the IFC Policy on Environmental and Social Sustainability, to improve the completeness of the scope of disclosure with respect to Community Relations impacts.

Benefits

Improves the SASB Standard: This revision enhances the completeness of the technical protocol, facilitating more representative and useful disclosures.

Revision EM-MM:06 – **Industry:** Metals & Mining; **Topic Name:** Community Relations

Summary of Change – Revise Technical Protocol

The SASB modified the technical protocol for metric NR0302-11[13] to clarify the definition of "non-technical delays."

Adherence to Attributes of Technical Protocols

The Metals & Mining industry Provisional Standard includes a topic for Community Relations with two associated provisional metrics that described the interaction between a company's operations and the local communities in which it does business. Provisional metric NR0302-14, associated with the topic, specifies that companies should disclose the number and duration of non-technical delays. While the provisional technical protocol associated with the metric was relevant and measurable, it was not complete with respect to the guidance provided to companies to determine what types of non-technical delays should be included in the scope of disclosure related to the Community Relations topic. The technical protocol has been revised to clarify the scope of disclosure, thereby eliminating this concern and improving the completeness and comparability of the information generated by the Standard.

Supporting Analysis

Companies employ a diverse set of strategies to manage their interactions with and impacts on local communities. Such policies and practices may be disclosed per metric NR0302-13, which describes a company's management of risks and opportunities related to community rights and interests, including economic, environmental, social, and cultural rights. In some instances, interactions with local communities may result in project delays due to the expression of concerns that must be addressed in project permitting or other processes, or, in extreme cases, company operations may be adversely impacted due to community protest.

With respect to defining the scope of disclosure, the provisional technical protocol specified that "The scope includes shutdowns and project delays including, but not limited to, those resulting from pending regulatory permits or other political delays, community or stakeholder resistance or protest, and armed conflict." As drafted in the provisional version of the Standard, the technical protocol included all permit delays in the scope of disclosure regardless of the nature of such delays. Permit delays can be driven many factors that are not related to community relations, including, but not limited to, governmental capacity constraints to process permits, governmental work stoppages or strikes, delays resulting from environmental reviews, delays due to non-community related technical clarifications or information requests, or community concerns related to the project. As such, in the provisional version of the metric, delays arising to factors that do not relate to the Community Relations topic were included with those that do, thereby reducing the representativeness of the metric with respect to topic-level performance.

To clarify the intent of the metric, the technical protocol was revised to specify that the entity should include in the scope of the metric only those delays related to permits that are "related to community concerns," thereby eliminating from the scope of disclosure those delays that do not relate to the Community Relations topic.

[13] The provisional version of this metric is NR0302-11 – Percentage of mine sites where acid rock drainage is: (1) predicted to occur, (2) actively mitigated, and (3) under treatment or remediation.

By limiting the scope of disclosure to only those delays that relate to the topic, the data disclosed per the metric is more representative of company performance and therefore enhance the usefulness of such information to investors.

Market Input

Investors: Multiple investors were supportive of SASB's process to define technical protocols that are objective and relevant to the subject matter.

Companies: Several companies expressed concerns that the provisional definition of "non-technical" delays did not distinguish between those that are attributable to the company versus those that are outside of the company's control.

Benefits

Improves the SASB Standard: This revision enhances the completeness of the technical protocol, ensuring that resultant disclosures are more closely tied to the Community Relations topic, thereby improving the representativeness of the information generated by the Standard.

Revision EM-MM:07 – **Industry:** Metals & Mining; **Topic Name:** Workforce Health, Safety, and Well-Being

2017 Technical Agenda Item #4-31 Description

SASB is evaluating the revision of metric NR0302-18[14] associated with the topic to improve its usefulness and to align with external standards.

Summary of Change – Revise Metrics

The SASB revised metric NR0302-18 from "(1) MSHA All-Incidence Rate, (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees" to "(1) MSHA All-incidence Rate, (2) fatality rate, (3) near miss frequency rate (NMFR), and (4) average hours of health, safety, and emergency response training for (a) full-time employees and (b) contract employees."

In addition, the topic name shall be revised from, Workforce Health, Safety, and Well-Being to Workforce Health & Safety.

Adherence to Criteria for Accounting Metrics

The Metals & Mining Industry Provisional Standard includes a topic for Workforce Health, Safety, and Well-Being with associated provisional metrics to describe a company's management of risks related to the health and well-being of its employees as well as its governance processes to prevent and/or manage accidents and incidents. With respect to employee health and well-being, provisional metric NR0302-18 included the total recordable injury rate, fatality rate, and near miss frequency rate for full-time, contract, and short-service employees. While these quantitative indicators were aligned with existing company norms for the management of employee health and safety and are distributive, useful, and comparable, they did not provide a complete view of a company's efforts to manage employee health and safety risk. Therefore, they may not have been fully representative of company performance. The revision of the metric to include an additional disclosure element related to employee safety training improves the completeness of company actions taken to manage employee health and safety risk. It also is more fairly represents of performance and better accomplishes the core objectives of the standard by offering investors a more decision-useful set of disclosures when combined with the existing metrics related to the topic.

In addition to more clearly aligning the topic name with the associated metrics, the topic name was revised from Workforce Health, Safety, and Well-Being to Workforce Health & Safety. The metrics associated with the topic specifically relate to Health and Safety, and describe company performance related to workforce injury and incident rates as well as policies and procedures to reduce or eliminate such injuries and incidents. The revision therefore improves the quality and clarity of the Standard.

Supporting Analysis

Health and safety incidents can have material financial impacts for industry participants. The *Metals & Mining Research Brief* prepared by SASB notes that health and safety incidents can cause significant material harm for industry participants. The brief notes that "In 2012, the metal mining industry had a fatal injury work rate . . . 2.4

[14] The provisional version of this metric was NR0302-18 – (1) MSHA All-Incidence Rate, (2) Fatality Rate, and (3) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees.

times the U.S. industry average" and that that, "In 2011 . . . companies operating domestically received 63,601 citations related to health and safety, for which $40.8 million in penalties and fines were assessed." Further, it was noted that "Of the 17 fatalities in non-coal mines in 2012, the Mining Safety and Health Administration (MSHA) reported that eight of the miners had less than one year of experience at the mine or task they were performing. This underscores the need for effective task training whenever miners are assigned to new tasks."

An important measure of management commitment to safety culture is the priority placed on providing safety training for the workforce. In its 10 Principles, the International Council on Mining and Metals, an international organization dedicated to a safe, fair, and sustainable mining industry requires member organizations to "Pursue continual improvement in health and safety performance with the ultimate goal of zero harm" and, as a key element of achieving this goal, to "Provide all employees with health and safety training, and require employees of contractors to undergo the same training."

The International Labour Organization (ILO) identifies training as a key element of a strong health and safety culture. In its Promotional Framework for Occupational Safety and Health Recommendation, the ILO states, "In promoting a national preventative safety and health culture as defined in Article 1(d) of the Convention, Members should seek . . . (b) to promote mechanisms for delivery of occupational education and training, in particular for management, supervisors, workers and their representatives . . . (c) to introduce occupational and safety health concepts and, where appropriate, competencies, in educational and vocational training programmes . . . "

Across the sector, several companies report metrics related to employee training. In a review of the five largest industry participants by market capitalization, all five discuss training in their voluntary sustainability reports, four provide metrics, and one reports the average training hours per employee. The extent of existing reporting on this topic reduces the marginal burden of collecting and/or reporting this data.

In a 2009 study on the relationship between safety training and incident rates from The Ergonomics Open Journal, the authors found from a literature review that of the "23 studies with quasi-experimental designs that evaluated the effects of worker safety health and training on OHS outcomes . . . all but two of the studies found significant positive effects." The paper concludes that, "safety training increases the reporting of injuries [and] also has real safety effects on days-away-from-work injuries . . . " Thus, the revision of the metric to include a measure of worker training improves the representativeness and completeness of the full scope of company efforts to ensure worker health and safety.

To ensure the additional disclosure element is comparable and verifiable, the OSHA regulation for occupational health and safety (U.S. 29 CFR 1910) has been referenced to define which employee training programs may qualify to be included when reporting the indicator. This regulation defines the safety requirements the aspects worker health and safety subject to Occupational Safety and Health Administration (OSHA) oversight, including means of egress, occupational health, hazardous materials management, personal protective equipment, fire protection, electrical systems, and other topics. If safety training does not fall under the topics listed in U.S. 29 CFR 1910, the technical protocol requires entities to disclose the scope of such trainings and the specific occupational risks or hazards the training is intended to address.

Market Input

Investors: The investors expressed a consistent, strong interest in the inclusion of additional forward-looking or predictive indicators with respect to health and safety, noting that the provisional metrics were largely backward-

looking. Investors suggested that this would improve several aspects of the decision-usefulness of the disclosure by making the metric a more representative, complete, and distributive indicator of Health and Safety performance.

Companies: The companies agreed with the materiality of Health, Safety, and Emergency Management, and some identified employee training as a performance indicator used by management to assess performance.

Benefits

Improves the SASB Standard: The revised SASB Standard provides a more complete description of company performance with respect to health, safety, and emergency management.

Improves decision-usefulness: Company disclosure of employee training provides a forward-looking indicator to enhance investor understanding of the strength of a company's safety culture and therefore its exposure to health, safety, and emergency management risk.

Revision EM-MM:08 – **Industry**: Metals & Mining; **Topic Name**: Business Ethics & Payments Transparency

Summary of Change – Revise Topic Name

The SASB renamed the provisional topic Business Ethics & Payments Transparency to Business Ethics & Transparency.

Supporting Rationale

The provisional topic name, Business Ethics & Payments Transparency highlighted the relevance of factors to fraud, corruption, bribery and facilitation payments, fiduciary responsibilities, or other illegal behavior that may have an ethical component. In the Extractives sector generally, and in the Oil & Gas – Metals & Mining industry specifically, the term "transparency" can refer to several aspects of overall ethnical business activity that extends beyond payments. Such transparency considerations include, but are not limited to, the structure and nature of contracts and licenses, the production or extractive process itself, the reporting of revenue collection and allocation, and social and economic spending by companies in the countries where extractive activities are taking place. As such, the revised topic name reflects the broader efforts made by companies to ensure transparency in their operating practices. Additionally, the topic name would be better aligned with the broad "issue" as defined in the International Council on Metals and Mining (ICMM) lists "Governance and Transparency" as a key topic, with focus areas that include beneficial ownership, conflict minerals, contract transparency, corruption and illicit financial flows, the Extractives Industry Transparency Initiative (EITI), and revenue transparency.

Benefits

Improves the SASB Standard: The revision improves the representativeness of the topic name with respect to its applicability to the industry.

Revision EM-MM:09 – **Industry**: Metals & Mining; **Topic Name**: Business Ethics & Payments Transparency

2017 Technical Agenda Item #4-32 Description

SASB is evaluating the addition of a provisional metric to ensure the usefulness, completeness, and representativeness of the metrics associated with the topic.

No Revision:

Based upon additional research and the lack of a clear, quantifiable metric that would result in useful and distributive disclosures, no changes related to the provisional Standard related to Technical Agenda item 4-32 have been made at this time.

Appendix A. Standards Board – Sector Committee Assignments

STANDARDS BOARD MEMBER	SECTOR CHAIR	OTHER COMMITTEES
Jeffrey Hales, PhD (Chair) Professor, Georgia Institute of Technology – Ernest Scheller Jr. College of Business	Financials, Renewable Resources & Alternative Energy	Transportation, Services, Resource Transformation
Verity Chegar (Vice Chair) Vice President, BlackRock	Extractives & Minerals Processing	Financials, Technology & Communications, Infrastructure
Robert B. Hirth Jr. (Vice Chair) Senior Managing Director, Protiviti; Chairman Emeritus, COSO	Technology & Communications	Health Care, Extractives & Minerals Processing, Services
Daniel L. Goelzer, JD Senior Counsel, Baker & McKenzie LLP	Services	Financials, Resource Transformation, Infrastructure
Kurt Kuehn Former CFO, United Parcel Service	Transportation, Infrastructure	Consumer Goods, Renewable Resources & Alternative Energy
Lloyd Kurtz, CFA Senior Portfolio Manager, Head of Social Impact Investing, Wells Fargo Private Bank	Health Care, Resource Transformation	Technology & Communications, Food & Beverage
Elizabeth Seeger Head of Sustainable Investing, KKR	Consumer Goods	Health Care, Extractives & Minerals Processing, Food & Beverage
Stephanie Tang, JD Director of Legal, Corporate Securities, Stitch Fix	Food & Beverage	Transportation, Consumer Goods, Renewable Resources & Alternative Energy

Appendix B. Redline Metric Tables

Redline tables are provided below for all sustainability accounting metrics (Table 1) and activity metrics (Table 2). All significant revisions to topics and metrics between the provisional standard and the codified standard are shown in redline; however, such redlines are not intended to communicate the full scope of such revisions, for which readers should refer to the codified Standard and accompanying content elsewhere in the *Basis for Conclusions*.

All redlines presented in these tables are associated with a revision number in the Revision Number column. Significant revisions to the technical protocol associated with a given metric will not necessarily be apparent in redline in the tables; however, the associated revision number will be noted in the Revision Number column of each table.

Any redlines that depict revisions to metrics but that are not accompanied by a revision number (i.e., "n/a") are not addressed in the *Basis for Conclusions* as these revisions have not altered the scope or content of metrics, such as those that are intended to improve the consistency, clarity, and accuracy of the standard. Similarly, if a metric is not accompanied by a revision number, the technical protocol may have been revised to improve the consistency, clarity, and accuracy of the standard.

Metals & Mining Industry

Table 1.

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	PROVISIONAL METRIC CODE	CODIFIED METRIC CODE[15]	REVISION NUMBER
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under ~~a regulatory program~~emissions-limiting regulations	Quantitative	Metric tons CO_2-e (t), Percentage (%)	NR0302-01	EM-MM-110a.1	n/a
	~~Description~~ Discussion 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	NR0302-02	EM-MM-110a.2	n/a
Air Quality	Air emissions for the following pollutants: (1) CO, (2) NO_x (excluding N_2O), (3) SO_x, (4) particulate matter (PM_{10}), (5) mercury (Hg), (6) lead (Pb), and (7) volatile organic compounds (VOCs)	Quantitative	Metric tons (t)	NR0302-03	EM-MM-120a.1	n/a
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	NR0302-04	EM-MM-130a.1	n/a
Water Management	(1) Total fresh water withdrawn, (2) total fresh water consumed, ~~percentage recycled,~~ percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand ~~C~~cubic meters (m^3), Percentage (%)	NR0302-05	EM-MM-140a.1	EM-MM:01
	Number of incidents of non-compliance associated with water-quality permits, standards, and regulations	Quantitative	Number	NR0302-06	EM-MM-140a.2	EM-MM:02

[15] The Provisional Metric Code column provides the metric code that appeared in the Provisional Standard. The Codified Metric Code column provides the revised metric code that appears in the Codified Standard. The revised metric code is structured as follows: [Sector Code]-[Industry Code]-[Topic Code].[Metric Number].

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	PROVISIONAL METRIC CODE	CODIFIED METRIC CODE[15]	REVISION NUMBER
Waste & Hazardous Materials Management	Total weight of tailings waste, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	NR0302-07	EM-MM-150a.1	n/a
	Total weight of mineral processing waste, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	NR0302-08	EM-MM-150a.2	n/a
	Number of tailings impoundments, broken down by MSHA hazard potential	Quantitative	Number	NR0302-09	EM-MM-150a.3	n/a
Biodiversity Impacts	Description of environmental management policies and practices for active sites	Discussion and Analysis	n/a	NR0302-10	EM-MM-160a.1	n/a
	Percentage of mine sites where acid rock drainage is: (1) predicted to occur, (2) actively mitigated, and (3) under treatment or remediation	Quantitative	Percentage (%)	NR0302-11	EM-MM-160a.2	n/a
	Percentage of (1) p~~P~~roved~~n~~ and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Quantitative	~~Metric tons (t), Percentage Grade~~ (%)	NR0302-12	EM-MM-160a.3	n/a
Security, Human Rights, ~~and~~ & Rights of Indigenous Peoples	Percentage of (1) p~~P~~roved~~n~~ and (2) probable reserves in or near areas of conflict	Quantitative	~~Metric tons (t), Grade~~Percentage (%)	NR0302-15	EM-MM-210a.1	n/a
	Percentage of (1) p~~P~~roved~~n~~ and (2) probable reserves in or near indigenous land	Quantitative	~~Metric tons (t), Grade~~Percentage (%)	NR0302-16	EM-MM-210a.2	EM-MM:03
	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	Discussion and Analysis	n/a	NR0302-17	EM-MM-210a.3	EM-MM:04

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	PROVISIONAL METRIC CODE	CODIFIED METRIC CODE[15]	REVISION NUMBER
Community Relations	Discussion of process to manage risks and opportunities associated with community rights and interests	Discussion and Analysis	n/a	NR0302-13	EM-MM-210b.1	EM-MM:05
	Number and duration of non-technical delays	Quantitative	Number, Days	NR0302-14	EM-MM-210b.2	EM-MM:06
Labor Relations	Percentage of active workforce covered under collective-bargaining agreements, broken down by U.S. and foreign employees	Quantitative	Percentage (%)	NR0302-19	EM-MM-310a.1	n/a
	Number and duration of strikes and lockouts	Quantitative	Number, Days	NR0302-20	EM-MM-310a.2	n/a
Workforce Health & Safety	(1) MSHA All-Incidence Rate, (2) Fatality Rate, and (3) Near Miss Frequency Rate, and (4) Average hours of health, safety, and emergency response training for (a) full-time employees and (b) contract employees	Quantitative	Rate	NR0302-18	EM-MM-320a.1	EM-MM:07
Business Ethics & Transparency	Description of the management system for prevention of corruption and bribery throughout the value chain	Discussion and Analysis	n/a	NR0302-21	EM-MM-510a.1	EM-MM:08
	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Quantitative	Metric tons saleable (t)	NR0302-22	EM-MM-510a.2	EM-MM:08

Table 2.

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	PROVISIONAL METRIC CODE	CODIFIED METRIC CODE[16]	REVISION NUMBER
Production of (1) metal ores and (2) finished metal products	Quantitative	Metric tons saleable (t)	NR0302-A	EM-MM-000.A	n/a
Total number of employees, percentage contractors	Quantitative	Number, Percentage (%)	NR0302-B	EM-MM-000.B	n/a

[16] The Provisional Metric Code column provides the metric code that appeared in the Provisional Standard. The Codified Metric Code column provides the revised metric code that appears in the Codified Standard. The revised metric code is structured as follows: [Sector Code]-[Industry Code]-[Topic Code].[Metric Number].

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