



SUSTAINABILITY ACCOUNTING STANDARD
RESOURCE TRANSFORMATION SECTOR

AEROSPACE & DEFENSE

Sustainability Accounting Standard

Sustainable Industry Classification System™ (SICS™) #RT0201
Prepared by the
Sustainability Accounting Standards Board®

MARCH 2015
Provisional Standard

AEROSPACE & DEFENSE

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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Table of Contents

- Introduction** **1**
- [Purpose & Structure](#) 1
- [Industry Description](#) 1
- [Guidance for Disclosure of Material Sustainability Topics in SEC filings](#) 2
- [Guidance on Accounting of Material Sustainability Topics](#) 4
- [Users of the SASB Standards](#) 4
- [Scope of Disclosure](#) 5
- [Reporting Format](#) 5
- [Timing](#) 7
- [Limitations](#) 7
- [Forward Looking Statements](#) 7
- Material Sustainability Topics & Accounting Metrics** **8**
- [Energy Management](#) 10
- [Hazardous Waste Management](#) 12
- [Data Security](#) 15
- [Product Safety](#) 19
- [Fuel Economy & Emissions in Use-phase](#) 22
- [Business Ethics](#) 24
- [Supply Chain Management & Materials Sourcing](#) 26

INTRODUCTION

Purpose & Structure

This document contains the SASB Sustainability Accounting Standard (SASB Standard) for the Aerospace & Defense industry.

SASB Sustainability Accounting 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 Standards identify sustainability topics at an industry level, which may constitute material information—depending on a company’s specific operating context— for a company within that industry. SASB Standards are intended to provide guidance to company management, which is ultimately responsible for determining which information is material and should therefore be included in its Form 10-K or 20-F and other periodic SEC filings.

SASB Standards provide companies with standardized sustainability metrics designed to communicate performance on industry level sustainability topics. When making disclosure on sustainability topics, companies can use SASB Standards to help ensure that disclosure is standardized and therefore decision-useful, relevant, comparable, and complete.

SASB Standards are intended to constitute “suitable criteria” as defined by AT 101.23 - 32¹ and referenced in AT 701², as having the following attributes:

- *Objectivity*—Criteria should be free from bias.
- *Measurability*—Criteria should permit reasonably consistent measurements, qualitative or quantitative, of subject matter.
- *Completeness*—Criteria should be sufficiently complete so that those relevant factors that would alter a conclusion about subject matter are not omitted.
- *Relevance*—Criteria should be relevant to the subject matter.

Industry Description

Companies in the Aerospace & Defense industry can be divided into three main categories: (1) commercial aircraft and parts manufacturing, (2) aerospace and defense parts manufacturing, and (3) defense primes. Commercial aircraft manufacturers represent approximately one quarter of industry revenues and sell mainly to commercial airlines, as well as U.S. and foreign governments. Aerospace and defense parts manufacturers represent the largest industry segment by total revenue and have a similar customer base but sell mainly to governments. Aerospace and defense companies operate globally and serve both international and domestic customers. Defense primes represent approximately one quarter of total industry revenues and manufacture military aircraft, space vehicles, missile systems, ammunition, small arms, naval ships, and other commercial and military vehicles. Their customers consist of various agencies of the U.S. government and related businesses with global operations. The defense primes category also includes firearms manufacturers, which sell to law enforcement agencies, businesses, distributors, retailers, and consumers.

¹ http://pcaobus.org/Standards/Attestation/Pages/AT101.aspx#at_101_fn7

² <http://pcaobus.org/Standards/Attestation/Pages/AT701.aspx>

Guidance for Disclosure of Material Sustainability Topics in SEC Filings

1. Industry-Level Sustainability Disclosure Topics

For the Aerospace & Defense industry, SASB has identified the following sustainability disclosure topics:

- Energy Management
- Hazardous Waste Management
- Data Security
- Product Safety
- Fuel Economy & Emissions in Use-phase
- Business Ethics
- Supply Chain Management & Materials Sourcing

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.”^{3, 4}

SASB has attempted to identify those sustainability topics that are reasonably likely to have a material effect on the financial condition or operating performance of companies within each SICs industry. SASB recognizes, however, that each company is ultimately responsible for determining what information should be disclosed within the context of Regulation S-K and other guidance.

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.”

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

The SEC has provided guidance for companies to use in determining whether a trend or uncertainty should be disclosed. The two-part assessment –prescribed by the SEC, based on probability and magnitude, can be applied to the topics included within this standard:

- 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.

³ TSC Industries v. Northway, Inc., 426 U.S. 438 (1976).

⁴ C.F.R. 229.303(Item 303)(a)(3)(ii).

- Second, 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

For purposes of comparability and usability, that companies should consider making disclosure on sustainability topics in the MD&A, in a sub-section titled "**Sustainability Accounting Standards Disclosures**."⁵

b. Other Relevant Sections of Form 10-K

In addition to the MD&A section, it may be relevant for companies to disclose sustainability information in other sections of Form 10-K, including, but not limited to:

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

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

- **Legal proceedings**—Item 103 of Regulation S-K requires companies to describe briefly any material pending or contemplated legal proceedings. Instructions to Item 103 provide specific disclosure requirements for administrative or judicial proceedings arising from laws and regulations that target discharge of materials into the environment or that are 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/conceptual-framework/>.

⁵ 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 for Material Sustainability Topics

For each sustainability topic included in the Aerospace & Defense industry Sustainability Accounting Standard, SASB identifies accounting metrics.

SASB recommends that each company consider using these sustainability accounting metrics when preparing disclosures on the sustainability topics identified herein;

As appropriate—and consistent with Rule 12b-20⁶—when disclosing a sustainability topic identified by this Standard, 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 **relative performance** with respect to its peers;
- The **degree of control** the registrant has;
- Any **measures the registrant has undertaken or plans to undertake** to improve performance; and
- Data for the registrant's **last three completed fiscal years** (when available).

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

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

Users of the SASB Standards

The SASB Standards are intended to provide guidance 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),⁷ 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. 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.

⁶ 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."

⁷ 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 that are consolidated for financial reporting purposes as defined by accounting principles generally accepted in the United States for consistency with other accompanying information within SEC filings⁸
- 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 the registrant considers the information necessary for investors to understand the effect of sustainability topics on the company's financial condition or operating performance (typically, this disclosure would be limited to risks and opportunities associated with these entities).

Reporting Format

Use of Financial Data

In instances where accounting metrics, activity metrics, and technical protocols in this standard incorporate financial data (e.g., revenues, cost of sales, expenses recorded and disclosed for fines, etc.), such financial data shall be prepared in accordance with the accounting principles generally accepted in the United States of America ("US GAAP") and be consistent with the corresponding financial data reported within the registrant's SEC filings. Should accounting metrics, activity metrics and technical protocols in this standard incorporate disclosure of financial data that is not prepared in accordance with US GAAP, the registrant shall disclose such information in accordance with the SEC Regulation G.

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).

⁸ See US GAAP consolidation rules (Section 810).

Activity metrics disclosed should:

- Convey contextual information that would not otherwise be apparent from SASB accounting metrics.
- Be deemed generally useful for an investor relying on SASB accounting metrics 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.⁹

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

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE
Production by reportable segment ¹⁰	Quantitative	Number	RT0201-A
Number of employees	Quantitative	Number	RT0201-B

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 such as the reliance on data from third-party reporting systems and technologies, 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 occur 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.

⁹ Improving Business Reporting: Insights into Enhancing Voluntary Disclosures, FASB Business Reporting Research Project, January 29, 2001.

¹⁰ Note to **RT0201-A**—Production should be disclosed as the number of units produced by product category, where relevant product categories include (1) ground vehicles, (2) aircraft, (3) marine vehicles, (4) vehicle and aircraft components, and (5) space and weapons systems.

Timing

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

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."

The following sections contain the disclosure guidance associated with each accounting metric such as guidance on definitions, scope, accounting, compilation, and presentation.

The term "shall" is used throughout this document to indicate those elements that reflect requirements of the Standard. The terms "should" and "may" are used to indicate guidance, which, although not required, provides a recommended means of disclosure.

Table 1. Sustainability Disclosure Topics & Accounting Metrics

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Energy Management	Total energy consumed, percentage grid electricity, percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	RT0201-01
Hazardous Waste Management	Amount of hazardous waste, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	RT0201-02
	Number and aggregate quantity of reportable spills, quantity recovered ¹¹	Quantitative	Number, Kilograms (kg)	RT0201-03
Data Security	Number of data security breaches and percentage involving confidential information ¹²	Quantitative	Number, Percentage (%)	RT0201-04
	Discussion of approach to managing data security risks within (a) company operations and (b) products	Discussion and Analysis	n/a	RT0201-05
Product Safety	Number of recalls and total units recalled ¹³	Quantitative	Number	RT0201-06
	Number of Airworthiness Directives received and total units affected ¹⁴	Quantitative	Number	RT0201-07
	Amount of legal and regulatory fines and settlements associated with product safety ¹⁵	Quantitative	U.S. Dollars (\$)	RT0201-08
Fuel Economy & Emissions in Use-phase	Revenue from alternative energy-related products	Quantitative	U.S. Dollars (\$)	RT0201-09
	Discussion of strategies and approach to address fuel economy and greenhouse gas emissions of products	Discussion and Analysis	n/a	RT0201-10
Business Ethics	Amount of legal and regulatory fines and settlements associated with incidents of corruption, bribery, and/or illicit international trade ¹⁶	Quantitative	U.S. Dollars (\$)	RT0201-11
	Revenue from countries ranked in the “E” or “F” Band of Transparency International’s Government Defence Anti-Corruption Index	Quantitative	U.S. Dollars (\$)	RT0201-12
	Description of processes to manage business ethics risks throughout the value chain	Discussion and Analysis	n/a	RT0201-13

¹¹ Note to **RT0201-03**—The registrant shall discuss its long-term activities to remediate spills that occurred in years prior to the reporting period but for which remediation activities are ongoing.

¹² Note to **RT0201-04**—Disclosure shall include a description of the corrective actions taken in response to specific incidents.

¹³ Note to **RT0201-06**—Disclosure shall include a discussion of notable recalls, such as those that affected a significant number of units or those related to a serious injury or fatality.

¹⁴ Note to **RT0201-07**—The registrant shall discuss notable Airworthiness Directives, such as those that resulted in an Emergency Airworthiness Directive, affected a significant number of products, or were associated with plane grounding(s) or accident(s).

¹⁵ Note to **RT0201-08**—Disclosure shall include a description of fines and settlements and corrective actions implemented in response to events.

¹⁶ Note to **RT0201-11**—Disclosure shall include a description of fines and settlements and corrective actions implemented in response to events.

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

TOPIC	ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE
Supply Chain Management & Materials Sourcing	Number of counterfeit parts detected, percentage avoided	Quantitative	Number, Percentage (%)	RT0201-14
	Percentage of materials costs for items containing critical materials	Quantitative	Percentage (%)	RT0201-15
	Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free	Quantitative	Percentage (%)	RT0201-16
	Discussion of the management of risks associated with the use of critical materials and conflict minerals	Discussion and Analysis	n/a	RT0201-17

Energy Management

Description

Energy is a critical input for value creation for aerospace and defense companies due to energy-intensive manufacturing processes. Purchased electricity represents the largest share of energy expenditures in the industry, followed by purchased fuels. As electricity production contributes significant GHG emissions and air pollution through the combustion of fossil fuels at the utility level, the cost of grid electricity may increase due to mitigation efforts directed at utilities. Similarly, as the extraction, production, and use of fossil fuels contribute to significant GHG emissions and environmental externalities, the cost of purchased fuel may also increase due to mitigation efforts. The likelihood and magnitude of impact of climate change regulations on aerospace and defense manufacturers will vary depending on the location of manufacturing facilities in the U.S. and abroad. Aerospace and defense companies' energy mix, including the use of electricity generated on-site rather than grid-sourced electricity and the use of alternative energy, can play an important role in influencing the cost and reliability of energy supply, and ultimately companies' profitability and risk profile.

Accounting Metrics

RT0201-01. Total energy consumed, percentage grid electricity, percentage renewable

- .01 The registrant shall disclose total energy consumption from all sources as an aggregate figure in gigajoules or their multiples.
- The scope includes energy purchased from sources external to the organization or produced by the organization itself (self-generated).
 - The scope includes only energy consumed by entities owned or controlled by the organization.
 - The scope includes energy from all sources, including direct fuel usage, purchased electricity, and heating, cooling, and steam energy.
- .02 In calculating energy consumption from 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 disclose purchased grid electricity consumption as a percentage of its total energy consumption.
- .04 The registrant shall disclose renewable energy consumption as a percentage of its total energy consumption.
- .05 The scope of renewable energy includes renewable fuel the registrant consumes and renewable energy the registrant directly produces, purchases through a renewable power purchase agreement (PPA) that explicitly includes renewable energy certificates (RECs), or for which Green-e Energy Certified RECs are paired with grid electricity.

- For any renewable electricity generated on-site, any RECs must be retained (i.e., not sold) and retired on behalf of the registrant in order for the registrant to claim them as renewable energy.
- For renewable PPAs, the agreement must explicitly include and convey that RECs be retained and retired on behalf of the registrant in order for the registrant to claim them as renewable energy.
- The renewable portion of the electricity grid mix that is outside of the control or influence of the registrant is excluded from disclosure.¹⁷
- Renewable energy is defined as energy from sources that are capable of being replenished in a short time through ecological cycles, such as geothermal, wind, solar, hydro, and biomass.

.06 For the purposes of this disclosure, the scope of renewable energy from hydro and biomass sources is limited to the following:

- Energy from hydro sources that are certified by the Low Impact Hydropower Institute or that are eligible for a state Renewable Portfolio Standard.
- Energy from biomass sources is limited to that from materials certified to a third-party standard (e.g., Forest Stewardship Council, Sustainable Forest Initiative, Programme for the Endorsement of Forest Certification, or American Tree Farm System), materials considered “eligible renewables” according to the Green-e Energy National Standard Version 2.5 (2014), and materials that are eligible for a state Renewable Portfolio Standard.

.07 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) and conversion of kWh to gigajoules (including for electricity from solar or wind energy).

¹⁷ SASB recognizes that RECs reflect the environmental attributes of renewable energy that have been introduced to the grid, and that a premium has been paid by the purchaser of the REC to enable generation of renewable energy beyond any renewable energy already in the grid mix, absent the market for RECs.

Hazardous Waste Management

Description

Aerospace and defense companies face regulatory and operational challenges in managing their manufacturing waste, as many of these substances can be hazardous to human health and the environment and therefore are subject to hazardous waste regulations within the U.S. and internationally. For example, the Resource Conservation and Recovery Act (RCRA) regulates generation, transport, treatment, storage, and disposal of hazardous and solid waste within the U.S. Hazardous wastes generated by aerospace and defense manufacturing include metals, spent acids, caustics, solid catalysts, and wastewater treatment sludge. Proper processing and disposal of hazardous waste materials is essential to limiting risk of remediation liabilities, fines, regulations, and possible loss of contracts. In addition, companies that are able to limit the waste of input materials and recycle the waste generated may achieve significant cost savings and improve profitability.

Accounting Metrics

RT0201-02. Amount of hazardous waste, percentage recycled

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

- Hazardous waste shall include both hazardous secondary materials defined according to 40 CFR 260.10 and materials that meet the definition of hazardous waste under Subtitle C of the U.S. Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA), according to 40 CFR 261.3.
- Hazardous wastes include those that display the following characteristics: ignitability, corrosivity, reactivity, or toxicity.

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

- A hazardous waste is recycled if it is used, reused, or reclaimed.
- Reclaimed materials are defined as those processed to recover or regenerate a usable product, consistent with [RCRA hazardous waste regulation](#). Common hazardous waste reclamation activities involve recovery of spent solvents (e.g., recovery of acetone) or metals (e.g., recovery of lead).
- Reused materials are defined as those recovered products or components of products that are used for the same purpose for which they were conceived.
- Recycled and remanufactured materials are defined as waste materials that have been reprocessed or treated by means of production or manufacturing processes and made into a final product, or made into a component for incorporation into a product.
- Materials sent for further recycling include those materials that are transferred to a third party for the express purpose of reuse, recycling, or refurbishment.

- The scope of recycled and remanufactured products includes primary recycled materials, co-products (outputs of equal value to primary recycled materials), and by-products (outputs of lesser value than primary recycled materials).
- Portions of products and materials that are disposed of in landfills are not considered recycled; only the portions of products that are directly incorporated into new products, co-products, or by-products shall be included in the percentage recycled.
- Materials incinerated, including for energy recovery, are not considered reused or recycled. Energy recovery is defined as the use of combustible waste as a means to generate energy through direct incineration, with or without other waste, but with recovery of the heat.

.10 Electronic waste material (e-waste) shall be considered recycled only if the registrant can demonstrate that this material was transferred to entities with third-party certification to a standard for e-waste recycling, such as Basel Action Network's e-Steward® standard or the U.S. EPA's Responsible Recycling Practices (R2) standard.

- The registrant shall disclose the standard(s) with which the entities it has transferred e-waste are compliant.

RT0201-03. Number and aggregate quantity of reportable spills, quantity recovered

.11 The registrant shall disclose the total number and quantity (in kilograms) of reportable spills, where:

- Reportable spills are defined as any release of a hazardous substance in an amount equal to or greater than the reportable quantity as listed in Table 302.4 of 40 CFR Part 302.4 of the U.S. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), including consideration of reportable quantities of mixtures and solutions as defined under 40 CFR Part 302.6 (b)(1).
- The number of reportable spills shall include any leaks, emissions, discharges, injections, disposals, and abandonment releases over time, counted once at the time identified, consistent with CERCLA definition of release (42 USC 9601(22)) and guidelines for reporting requirements (40 CFR Part 302).
- The aggregate quantity reported shall represent the total quantity of material released to the environment, and shall not be reduced by the amount of such hazardous substances that are subsequently recovered, evaporated, or otherwise lost.
- The scope of disclosure includes all spills, even those in jurisdictions that are not subject to regulation under CERCLA.

.12 The registrant shall calculate the quantity of spills recovered as the quantity of spilled hazardous substances (in kilograms) removed from the environment through short-term (i.e., less than one year from time of spill) release response activities, excluding:

- Amounts that were recovered during longer-term (i.e., more than one year from time of spill) remediation at spill sites.
- Amounts that evaporated, burned, or were dispersed.

.13 The registrant may choose to disclose releases to soil and water separately. A release that qualifies as a release to both soil and water should be reported as a single release to water, with the volume properly apportioned to soil and water.

Note to **RT0201-03**

.14 Where applicable, the registrant shall discuss its activities to remediate spills that occurred in years prior to the disclosure period but for which remediation activities are ongoing and long-term.

.15 Relevant activities include, but are not limited to, land-use controls, site monitoring, site maintenance, and continued cleanup.

Additional References

For guidance on the “legitimate recycling” of hazardous waste see 40 CFR 260.43.

Data Security

Description

Companies in the Aerospace & Defense industry have access to highly classified information and play a critical role in the execution and protection of military strategy. As such, companies in this industry are prime targets for hackers motivated to learn military secrets. A data security breach can be costly for a company, its clients, and the public when government operations are compromised. This issue also applies to aircraft manufacturers as technological advances may make aircraft susceptible to cyber attackers. Ensuring data security may require aerospace and defense companies to invest in R&D and increase CapEx in the short to medium term to improve the security of their facilities and their products. Significant disruptions or security breaches are also likely to impair intangible assets through reputational damage, and can lead to a loss in customer confidence. Subsequently, companies could lose market share and revenue if customers switch to more secure solutions.

Accounting Metrics

RT0201-04. Number of data security breaches and percentage involving confidential information

- .16 The registrant shall calculate and disclose the total number of data security breaches, which are defined as instances of unauthorized acquisition, access, use, or disclosure of protected information.
- .17 The scope of disclosure shall be limited to data security breaches, cybersecurity risks, and incidents that resulted in the registrant's business processes deviating from its expected outcomes for confidentiality, integrity, and availability.
 - The scope of disclosure shall include incidents of unauthorized acquisition or acquisition without valid authorization, resulting from people, process, or technology deficiencies or failures.
 - The scope of disclosure shall exclude disruptions of service due to equipment failures.
- .18 The registrant shall disclose the percentage of data security breaches in which confidential information was breached, where confidential information includes, but is not limited to:
 - Confidential Business Information (CBI), defined, consistent with 19 CFR 201.6, as information that concerns or relates to trade secrets, processes, operations, identification of customers, inventories, or other information of commercial value, the disclosure of which is likely to have the effect of causing substantial harm to the competitive position of the person, firm, partnership, or corporation from which the information was obtained. Confidential business information includes "proprietary information" within the meaning of section 777(b) of the Tariff Act of 1930 ([19 U.S.C. 1677f\(b\)](#)).
 - Classified national security information, defined as information that has been determined pursuant to [Executive Order 13526](#) or any predecessor order to require protection against unauthorized disclosure and is marked to indicate its classified status when in documentary form.

- Personally Identifiable Information (PII), defined according to the definition established in [Privacy: Alternatives Exist for Enhancing Protection of Personally Identifiable Information](#) (GAO Report 08-536, May 2008) as any information about an individual that is maintained by an entity, including (1) any information that can be used to distinguish or trace an individual's identity, such as name, Social Security number, date and place of birth, mother's maiden name, or biometric records; and (2) any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information.
- .19 The scope of disclosure is limited to breaches in which customers were notified of the breach, either as required contractually or by law, or disclosures made voluntarily by the registrant.
- .20 Disclosure shall include incidents in which encrypted data were acquired with an encryption key that was also acquired.
- .21 The registrant may delay disclosure if a law enforcement agency has determined that notification impedes a criminal investigation until the law enforcement agency determines that such notification does not compromise such investigation.
- .22 Disclosure shall be additional but complementary to the U.S. Security and Exchange Commission's (SEC) [CF Disclosure Guidance: Topic No. 2, Cybersecurity](#).
- At a minimum, this includes instances when the costs or other consequences associated with one or more known incidents—or the risk of potential incidents—represents a material event, trend, or uncertainty that is reasonably likely to have a material effect on the registrant's results of operations, liquidity, or financial condition, or would cause reported financial information not to be necessarily indicative of future operating results or financial condition (e.g., theft of intellectual property, reduced revenue, increased cybersecurity protection expenditure, litigation costs, etc.).

Note to **RT0201-04**

- .23 The registrant shall describe the corrective actions taken in response to specific incidents, such as changes in operations, management, processes, products, business partners, training, or technology.
- .24 All disclosure shall be sufficient such that it is specific to the risks the registrant faces, but disclosure itself will not compromise the registrant's ability to maintain data privacy and security.

RT0201-05. Discussion of approach to managing data security risks within (a) company operations and (b) products

- .25 The registrant shall discuss its approach to identifying, addressing, and managing data security risks (a) associated with its own operations and (b) associated with its products.
- .26 For data security risks that relate to the registrant's operations, the registrant shall describe how it identifies and prioritizes threats and vulnerabilities in its information systems that pose a data security threat, where
- A threat is defined as any circumstance or event with the potential to adversely impact organizational operations (including mission, functions, image, or reputation), organizational assets, individuals, other organizations, or national security through an information system via unauthorized access, destruction, disclosure, or modification of information and/or denial of service.

- A vulnerability is defined as a weakness in an information system, system security procedures, internal controls, or implementation that could be exploited by a data security threat source.
- .27 The registrant shall describe how it addresses and manages the threats and vulnerabilities it has identified, including, but not limited to, operational procedures, management processes, structure of products, selection of business partners, employee training, and use of technology.
- .28 The registrant should discuss trends it has observed in type, frequency, and origination of attacks to its data security and information systems.
- .29 Disclosure shall be additional but complementary to the disclosure of preparation, detection, containment, and post-incident activity according to the U.S. Security and Exchange Commission’s (SEC) [CF Disclosure Guidance: Topic No. 2, Cybersecurity](#).
- At a minimum, this includes instances when the costs or other consequences associated with one or more known incidents—or the risk of potential incidents—represents a material event, trend, or uncertainty that is reasonably likely to have a material effect on the registrant’s results of operations, liquidity, or financial condition or would cause reported financial information not to be necessarily indicative of future operating results or financial condition (e.g., reduced revenue, increased cybersecurity protection expenditure, litigation costs, etc.).
- .30 All disclosure shall be sufficient such that it is specific to the risks the registrant faces but disclosure itself will not compromise the registrant’s ability to maintain data privacy and security.
- .31 The registrant may choose to describe the degree to which its management approach is aligned with an external standard or framework for managing data security, such as:
- ISO/IEC 27001:2013 – Information technology – Security techniques – Information security management systems – Requirements
 - [“Framework for Improving Critical Infrastructure Cybersecurity, Version 1.0,”](#) February 12, 2014, National Institute of Standards and Technology (NIST)
- .32 For data security risks associated with its products, the registrant shall discuss its approach to identifying, eliminating, and managing these risks.
- .33 The scope of disclosure shall include a discussion of all stages of the product lifecycle, as relevant, including product design, the manufacturing supply chain, product distribution, the product usephase, and end-of-life management.
- .34 The registrant shall discuss how it identifies and mitigates data security risks that may be present within its manufacturing supply chain, where:
- Examples of data security risks in the supply chain may include, but are not limited to, weaknesses in supplier information systems, risk of “backdoors” being inserted into products, or counterfeit products, components, or parts that create a data security risk.

- Examples of mitigation strategies may include, but are not limited to, hardware-based security considerations integrated into the product design and development process, management systems required of suppliers, the use of cybersecurity specialists, “ethical hacking,” and supply chain controls.

.35 The registrant shall discuss how it manages security flaws, bugs, and systems weaknesses that are detected in its products after product distribution and use.

- Disclosure should include a discussion of the effects of such incidents, including costs for remediation and impacts on future business.
- Disclosure should include a discussion of the management process for corrective actions.

.36 Where relevant, the registrant should describe its products and services that specifically enable enhanced data security for customers or features that it integrates into existing products to specifically enhance data security.

- Examples of security-related products and services include hardware-based encryption products, multi-factor authentication devices (such as security tokens or biometric scanners), information assurance systems, secure communications systems, intelligence-driven computer network defense systems, penetration testing, and threat monitoring.

Product Safety

Description

Aerospace and defense products expose users and civilians to dramatic risk through low-probability but high-impact product accidents. For commercial aircraft manufacturing and aerospace and defense parts companies, passenger and cargo safety is paramount. Through proper design, as well as ongoing customer engagement involving maintenance and accident investigations, companies in this industry can improve performance on product safety. Companies with poor product quality and safety may experience revenue loss due to damaged reputation, recalls, or fines.

Accounting Metrics

RT0201-06. Number of recalls and total units recalled

.37 The registrant shall disclose the total number of product-safety-related recalls, including those that are voluntary and involuntary, where:

- A recall is defined, consistent with the definition in the U.S. Consumer Product Safety Commission's [Recall Handbook](#), as any repair, replacement, refund, or notice/warning program intended to protect consumers from products that present a safety risk.
- Involuntary recalls are those required by regulatory agencies, and are issued when a product does not comply with regulatory safety standards, or when there is a safety-related defect in a product.
- Voluntary recalls are those initiated by the registrant in order to take products off the market.

.38 The registrant shall disclose the total number of units recalled during the fiscal year.

.39 The scope excludes disclosure of products provided to customers for the explicit purpose of testing, such as those products created for prototype testing related to governmental contracts.

.40 The registrant may choose, in addition to total units recalled, to disclose the percentage of recalls that were (1) voluntarily and (2) involuntarily issued.

Note to RT0201-06

.41 The registrant shall discuss notable recalls, such as those that affected a significant number of products or those related to serious injury or fatality.

.42 For such recalls, the registrant should provide:

- Description and cause of the recall issue
- The total number of units recalled
- The cost to remedy the issue (in U.S. dollars)

- Whether the recall was voluntary or involuntary
- Corrective actions
- Any other significant outcomes (e.g., legal proceedings, fatalities, etc.)

RT0201-07. Number of Airworthiness Directives received and total units affected

.43 The registrant shall disclose the number of unique Airworthiness Directives it received from aviation authorities and the total number of units affected, where:

- An Airworthiness Directive is a legally enforceable rule issued by the Federal Aviation Administration (FAA), the Department of Defense (DoD), or foreign equivalent that applies to aircraft, aircraft engines, propellers, and appliances. The registrant shall disclose the total number of units affected by each Airworthiness Directive, where:
- Total number of units affected is defined as the combined quantity of products and parts that were subject to part of any Airworthiness Directive that the registrant received during the fiscal year.

.44 Relevant national and international Airworthiness Directives include, but are not limited to, those found in the following databases:

- FAA-regulated Airworthiness Directives, available [here](#)
- European Aviation Safety Agency-regulated Airworthiness Directives, available [here](#)
- Australian Civil Aviation Safety Authority-regulated Airworthiness Directives, available [here](#)
- Japanese Ministry of Land, Infrastructure, Transport, and Tourism-regulated Airworthiness Directives, available [here](#)

Note to **RT0201-07**

.45 The registrant shall discuss notable Airworthiness Directives, such as those that resulted in an Emergency Airworthiness Directive, affected a significant number of products, or were associated with plane grounding(s) or accident(s).

.46 For such Airworthiness Directives, the registrant should provide:

- Description and cause of the issue
- The total number of units affected
- The cost to remedy the issue (in U.S. dollars)
- Corrective actions
- Any other significant outcomes (e.g., legal proceedings, fatalities, etc.)

RT0201-08. Amount of legal and regulatory fines and settlements associated with product safety

- .47 The registrant shall disclose the amount (excluding legal fees) of all fines or settlements associated with incidents relating to product safety, including, but not limited to, violations of the Federal Aviation Act, the Consumer Product Safety Act, the U.S. National Electrical Code, and Occupational Safety and Health Administration (OSHA) Safety Standards (such as the requirement for testing and certification by a Nationally Recognized Testing Laboratory [NRTL] under 29 CFR Part 1910 or by a Qualified Testing Laboratory [QTL] under 29 CFR Part 1926).
- .48 Disclosure shall include civil actions (e.g., civil judgment, settlements, or regulatory penalties) and criminal actions (e.g., criminal judgment, penalties, or restitutions) taken by any entity (government, businesses, or individuals).

Note to **RT0201-08**

- .49 The registrant shall briefly describe the nature (e.g., guilty plea, deferred agreement, or non-prosecution agreement) and context (e.g., inadequate testing or certification, etc.) of fines and settlements.
- .50 The registrant shall describe any corrective actions it has implemented as a result of each incident. These may include, but are not limited to, specific changes in operations, management, processes, products, business partners, training, or technology.
- .51 All disclosure shall be sufficient such that it is specific to the risks the registrant faces, but disclosure itself will not compromise the registrant's ability to maintain data privacy and security. Sentence

Additional References

FAA Airworthiness Directives https://www.faa.gov/aircraft/air_cert/continued_operation/ad/

Fuel Economy & Emissions in Use-phase

Description

Customer and regulatory concern about climate change and other environmental impacts is increasing the demand for energy-efficient and alternative energy products in the Aerospace & Defense industry. Many of the industry's products release significant amounts of greenhouse gases (GHGs) and other air emissions during use. As the designers and manufacturers of most of the global aerospace and defense transportation fleet, companies in this industry have a unique opportunity to support many industries and government agencies that are striving to meet increasing GHG and fuel-management goals and imperatives. Products with higher fuel economy and lower use-phase emissions are well positioned to capture expanding market share and adapt to changing customer preferences and regulations around fuel economy and emissions.

Accounting Metrics

RT0201-09. Revenue from alternative energy-related products

.52 The registrant shall disclose its total revenue from the sale of alternative energy-related products, where:

- Alternative energy-related products include products such as vehicles, vehicle components, and stationary power generation equipment that rely on alternative fuel or energy as a primary means of propulsion and/or energy production.
- Alternative energy and fuel includes:
 - Renewable fuel and energy, which is defined as that from sources that are capable of being replenished in a short time through ecological cycles, such as geothermal, wind, solar, hydroelectric, and biomass (including ethanol, first-generation biofuels, and advanced biofuels).
 - Hydrogen fuel and fuel cells including those that operate using natural gas, propane, and methanol.
- Electric, hybrid electric, and dual-fueled products for which one of the fuel sources is an alternative fuel shall be considered within the scope of disclosure.

RT0201-10. Discussion of strategies and approach to address fuel economy and greenhouse gas emissions of products

.53 The registrant shall discuss its strategies and approach to improving the fuel economy and reducing the use-phase greenhouse gas (GHG) emissions of its products.

.54 Relevant aspects of the approach and strategy to discuss include improvements to existing products and technologies, the introduction of new technologies, research and development efforts into advanced technologies, and partnerships with peers, academic institutions, and/or customers (including governmental customers).

.55 Relevant technologies to discuss include, but are not limited to, those related to materials design and engineering, advanced powertrains, renewable fuels, energy storage and batteries, aerodynamic design, and products and fuels that otherwise result in reduced GHG emissions, where:

- Advanced powertrain technologies include vehicles and vehicle components that are electric, hybrid electric, plug-in hybrid, dual-fuel, and zero-emissions (e.g., fuel cell).
- Renewable fuels and energy technologies are those that operate on sources that are capable of being replenished in a short time through ecological cycles, including geothermal, wind, solar, hydroelectric, and biomass (including ethanol, first-generation biofuels, and advanced biofuels).
- Products that result in reduced GHG emissions include any vehicle or technology that achieves a significant reduction in petroleum consumption as well as advanced lean burn technology vehicles and technologies, as described in the U.S. National Defense Authorization Act of 2008.
- Fuels that result in reduced GHG emissions further include denatured alcohol, methanol, mixtures containing up to 85 percent methanol or denatured ethanol, natural gas, and propane (liquefied petroleum gas), as described in the U.S. Energy Policy Act (EPAct) of 2005.
- Where relevant, the registrant shall discuss the technologies it is prioritizing to improve the fuel economy and reduce the GHG emissions of its products, such as the specific type of fuel systems it is developing (e.g., hybrid, electric, or fuel cell).

.56 The registrant shall discuss the factors influencing these efforts, such as meeting civil customer demand, alignment with industry initiatives, and/or meeting requirements of federal procurement programs and initiatives, where:

- Relevant programs and initiatives to discuss include, but are not limited to, Executive Order 13514, International Civil Aviation Organization Resolution A38-18, and the Marine Corps Medium Tactical Vehicle Replacement initiative.

.57 The registrant should discuss the benchmarks it uses to measure improvements in product fuel efficiency for relevant vehicles and/or vehicle system segments, including a discussion of targets for fuel efficiency improvements.

.58 The registrant should provide measurements of fuel efficiency and fuel efficiency improvements for its relevant vehicle and/or vehicle systems segments.

- Measurements of fuel efficiency and fuel efficiency improvements may include:
 - Inherent fuel efficiency measurements, such as miles per gallon for vehicles and vessels and 1/Specific Air Range for aerospace vehicles; or
 - Year-over-year fuel efficiency improvements.

.59 The registrant may discuss how customer demand and requirements affect fuel efficiency measures and improvements, where relevant.

Business Ethics

Description

Aerospace and defense companies are particularly vulnerable to regulatory scrutiny of business ethics and export practices because of their frequent interactions with U.S. and foreign governments as well as global corporate customers. The contract bidding process for aerospace and defense products and services provides opportunities for cooperative behavior to assist in obtaining or retaining business, however, these same practices can also result in corruption and bribery. Companies in this industry have often been found in violation of corruption and anti-bribery laws such as the Foreign Corrupt Practices Act (FCPA) and the U.K. Bribery Act. They are under increasing pressure to ensure that their governance structures and practices can prevent corruption and participation—whether willful or unintentional—in illegal or unethical payments to government officials, or exertion of unfair influence through gifts or other means. Operating in corruption-prone countries can exacerbate these risks. Unethical practices may jeopardize future revenue growth due to reputational risks and can result in significant legal costs and liabilities.

Accounting Metrics

RT0201-11. Amount of legal and regulatory fines and settlements associated with incidents of corruption, bribery, and/or illicit international trade

.60 The registrant shall disclose the amount (excluding legal fees) of all fines or settlements associated with incidents of corruption, bribery, and/or illicit international trade, including, but not limited to, violations of the following:

- Foreign Corrupt Practices Act of 1977 (FCPA) (15 U.S.C. § 78dd-1, *et seq.*)
- Arms Export Control Act (AECA)
- Export Administration Regulations (EAR), 15 C.F.R. Parts 730–774
- Immigration and Customs Enforcement (ICE)
- International Traffic in Arms Regulations (ITAR), 22 C.F.R. Parts 120–130
- U.S. Munitions List (USML) (ITAR Part 121)

.61 Disclosure shall include civil actions (e.g., civil judgment, settlements, or regulatory penalties) and criminal actions (e.g., criminal judgment, penalties, or restitutions) taken by any entity (government, businesses, or individuals).

Note to **RT0201-11**

.62 The registrant shall briefly describe the nature (e.g., guilty plea, deferred agreement, or non-prosecution agreement) and context (e.g., bribing an official, etc.) of fines and settlements.

.63 The registrant shall describe any corrective actions it has implemented as a result of each incident. This may include, but is not limited to, specific changes in operations, management, processes, products, business partners, training, or technology.

.64 All disclosure shall be sufficient such that it is specific to the risks the registrant faces, but disclosure itself will not compromise the registrant's ability to maintain data privacy and security.

RT0201-12. Revenue from countries ranked in the "E" or "F" Band of Transparency International's Government Defence Anti-Corruption Index

.65 The registrant shall disclose the amount of revenue from countries scored in the "E" or "F" band of Transparency International's Government Defence Anti-Corruption Index.

- Transparency International's Government Defence Anti-Corruption Index defines bands "E" and "F" respectively, as having "Very High" and "Critical" levels of risk of corruption.

.66 The registrant shall calculate its disclosure according to the scoring in the most current available version of the Government Defence Anti-Corruption Index at the close of its fiscal year via Transparency International's publicly accessible [website](#).

.67 The registrant may choose to provide discussion around operations that are located in countries with "E" or "F" scores in the index but that present low business ethics risks. The registrant may choose to provide similar discussion for operations located in countries that are not scored in the "E" or "F" Band of the index but that present unique or high business ethics risks.

RT0201-13. Description of processes to manage business ethics risks throughout the value chain

.68 The registrant shall discuss its processes and due diligence procedures for assessing and managing risks relating to business ethics that it faces within the scope of its own operations as well as those associated with business partners in its value chain.

.69 Relevant processes to discuss include, but are not limited to, employee awareness programs, internal mechanisms for reporting and following up on suspected violations, anti-corruption policies, and participation in the International Forum on Business Ethical Conduct (IFBEC).

.70 Relevant business ethics risks include bribery, as regulated by the Foreign Corrupt Practices Act (FCPA) and the International Traffic in Arms Regulations (ITAR); corruption, as regulated by the FCPA; and illicit arms trade, as regulated by the ITAR, the Export Administration Regulations (EAR), and Defense Offset Disclosures Act.

.71 Relevant business partners include customers, suppliers, contractors, subcontractors, and joint-venture partners.

.72 The registrant shall discuss areas of its operations that are at the highest risk for corruption and bribery occurrences, such as those operations in countries with low rankings in Transparency International's [Government Defence Anti-Corruption Index](#).

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

- Defense Industry Initiative on Business Ethics and Conduct (DII) principles
- 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)
- TRACE International TRACE Standard

Supply Chain Management & Materials Sourcing

Description

Aerospace and defense companies are exposed to supply chain risks when rare earth or “conflict” minerals and metals are used in products. Counterfeit components can lead to product malfunctions and compromised safety and security. Proactive supply chain audits and management will help insulate companies from reputational and regulatory risk. Sourcing risks associated with rare metals and conflict minerals are due to a low substitution ratio, concentration of deposits in only a few countries, and geopolitical considerations. Companies in this industry also face competition due to increasing global demand for these minerals from other sectors, which can result in significant price increases and supply risks. There is also a risk that counterfeit or compromised products can enter the supply chain of aerospace and defense companies. Companies that are able to limit the use of critical and conflict materials, as well as securing their supply, will not only minimize environmental and social externalities related to extraction, but also protect themselves from supply disruptions and volatile input prices.

Accounting Metrics

RT0201-14. Number of counterfeit parts detected, percentage avoided

.74 The registrant shall disclose the total number of counterfeit parts or suspected counterfeit parts that were detected in its operations, where:

- Counterfeit parts and suspected counterfeit parts are defined according to definitions contained in 48 CFR Part 252.246–7007, Contractor Counterfeit Electronic Part Detection and Avoidance System.
- The number of counterfeit parts detected includes those that the registrant, its business partners, or its customers become aware of or any electronic part or end item, component, part, or assembly that gives the registrant, its business partners, or its customers any reason to suspect that it contains counterfeit electronic parts.
- The scope of disclosure includes those parts detected before procurement, and therefore avoided; those detected during manufacturing, assembly, and testing; and those detected after sale to the registrant’s customer(s).

.75 The percentage avoided is calculated as the number of counterfeit or suspect counterfeit parts that were detected prior to the sale and delivery of the part to a customer divided by the total number of counterfeit or suspect counterfeit parts that were detected, where:

- Detection prior to sale and delivery includes any counterfeit or suspect counterfeit part that was detected during procurement, manufacturing, assembly, or testing. This includes counterfeit or suspect counterfeit parts that were not purchased by the registrant but could have been purchased, except for the fact that they were detected.

.76 The registrant should discuss at which point it detected the counterfeit parts (e.g., whether the parts were detected by the registrant’s business partners, the registrant’s testing systems prior to production or after production, or if the registrant was notified by its customers, etc.).

.77 The registrant should discuss its compliance with the provisions of Defense Federal Acquisition Regulation Supplement: Detection and Avoidance of Counterfeit Electronic Parts (DFARS Case 2012-D055) and/or SAE International Standard, SAE AS 5553 – Fraudulent/Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition.

RT0201-15. Percentage of materials costs for items containing critical materials

.78 The registrant shall calculate the percentage as the cost of raw materials that contain critical materials divided by the total cost of raw materials.

- The scope of disclosure includes materials costs for parts, components, commodities, associated freight, and storage.

.79 A critical material is defined, consistent with the National Research Council’s “Minerals, Critical Minerals, and the U.S. Economy”, as one that is both essential in use and subject to the risk of supply restriction.

.80 At a minimum, the scope of critical materials includes the following minerals and metals defined by the National Research Council, as well as materials specifically identified by the Department of Defense (DoD), through the [Strategic and Critical Materials 2013 Report on Stockpile Requirements](#), for potential shortfall in defense-related applications:

- Antimony, cobalt, fluorspar, gallium, germanium, graphite, indium, magnesium, niobium, tantalum, and tungsten;
- Platinum group metals (platinum, palladium, iridium, rhodium, ruthenium, and osmium); and
- Rare earth elements, which include yttrium, scandium, lanthanum, and the lanthanides (cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium).
- In addition to the above, defense-related critical materials include: tin, aluminum oxide-fused crude, silicon carbide, bismuth, manganese metal electrolytic, beryllium metal, and chromium metal as well as DoD proprietary materials (e.g., specific types of carbon fiber and a specialty rare earth oxide).

RT0201-16. Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free

.81 The registrant shall calculate the percentage as the number of tungsten, tin, tantalum, and gold smelters and/or refineries within its supply chain that are verified to be conflict-free divided by the total number of tungsten, tin, tantalum, and gold smelters and/or refineries within its supply chain.

.82 A smelter or refiner is considered to be conflict-free if it can demonstrate compliance with:

- The Electronic Industry Citizenship Coalition (EICC) and Global e-Sustainability Initiatives (GeSI) Conflict-Free Smelter Program (CFSP) assessment protocols.
- The Responsible Jewellery Council’s (RJC) Chain-of-Custody (CoC) Standard.

.83 A smelter or refinery is considered to be within the registrant's supply chain if it supplies, or is approved to supply, tungsten, tin, tantalum, or gold that is contained in any product the registrant manufactures or contracts to be manufactured.

- The scope includes smelters or refineries that supply material directly to the registrant, as well as those that supply material to any of its suppliers of raw materials, components, or subassemblies.

RT0201-17. Discussion of the management of risks associated with the use of critical materials and conflict minerals

.84 The registrant shall discuss its strategic approach to managing its risks associated with usage of critical materials and conflict minerals in its products, including physical limits on availability, access, price, and reputational risks, where:

- A critical material is defined, consistent with the National Research Council's "Minerals, Critical Minerals, and the U.S. Economy", as one that is both essential in use and subject to the risk of supply restriction. At a minimum, the scope of critical materials includes the following minerals and metals defined by the National Research Council, as well as materials specifically identified by the Department of Defense (DoD), through the [Strategic and Critical Materials 2013 Report on Stockpile Requirements](#), for potential shortfall in defense-related applications:
 - Antimony, cobalt, fluorspar, gallium, germanium, graphite, indium, magnesium, niobium, tantalum, and tungsten;
 - Platinum group metals (platinum, palladium, iridium, rhodium, ruthenium, and osmium); and
 - Rare earth elements, which include yttrium, scandium, lanthanum, and the lanthanides (cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium).
 - In addition to the above, defense-related critical materials include: tin, aluminum oxide-fused crude, silicon carbide, bismuth, manganese metal electrolytic, beryllium metal, and chromium metal as well as DoD proprietary materials (e.g., specific types of carbon fiber and a specialty rare earth oxide).
- Conflict minerals are defined as tungsten, tin, tantalum, and gold.

.85 The registrant should identify which materials and minerals present a risk to its operations, which type of risk they represent, and the strategies the registrant uses to mitigate the risk.

.86 For critical materials, relevant strategies to discuss include diversification of suppliers, stockpiling of materials, expenditures in R&D for alternative and substitute materials, and investments in recycling technology for critical materials.

.87 For conflict minerals, relevant strategies to discuss include due diligence practices, supply chain auditing, supply chain engagement, and partnerships with industry groups or nongovernmental development organizations.

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