

Assent

Faster Intelligence. Stronger Supply Chains.

eBook

The Responsible Minerals Handbook

From Compliance Pressure to Competitive Differentiator



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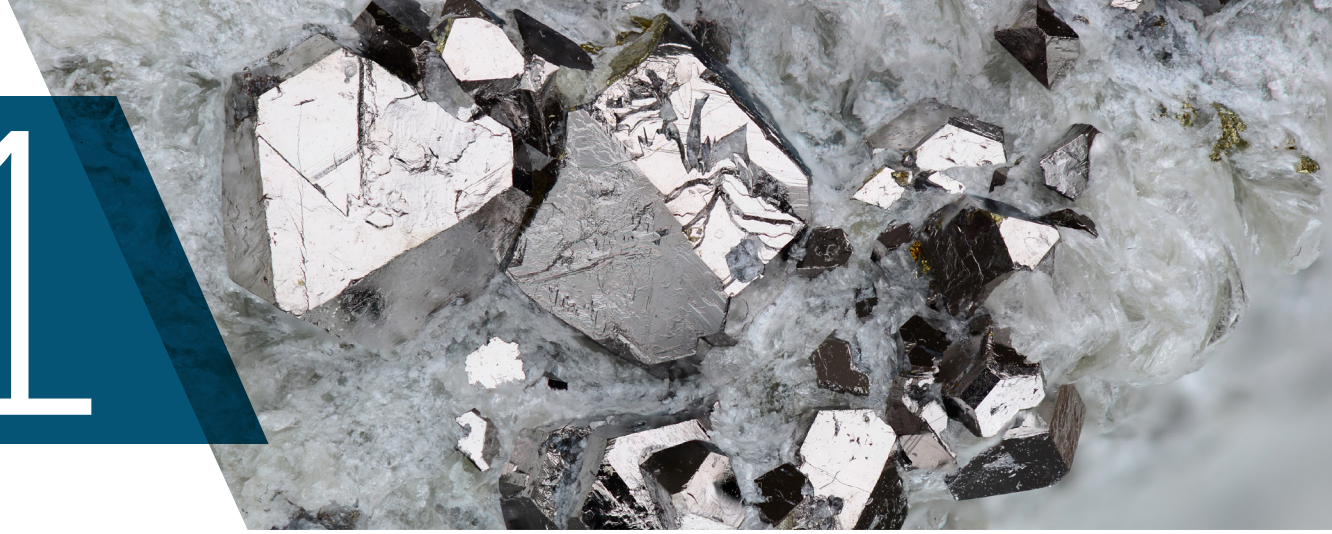
Introduction

Responsible minerals sourcing has evolved from a U.S. compliance requirement to a critical, and highly visible, expectation for companies with corporate supply chain sustainability goals. Manufacturers and distributors are increasingly expected to understand mineral origin and demonstrate that their sourcing decisions align with ethical, responsible practices. Meeting that expectation requires a supply chain data management program built for traceability, one that improves efficiency, reduces cost and rework, and produces consistent, decision-ready information as requirements evolve and stakeholder scrutiny increases. When implemented well, a responsible minerals program strengthens supply chain resilience and reduces sourcing, disruption, and reputational risk.

But many companies still lack sufficient supply chain visibility, and the data infrastructure needed to identify issues early and respond with confidence. Without reliable supplier and smelter or refiner data, for example, organizations struggle to generate credible insights, meet customer expectations, and withstand audits and inquiries.

In this handbook, you will learn how the responsible minerals landscape is evolving, what that means for your supply chain, and how to build a program that's prepared for what comes next.

CHAPTER 01



The Evolution of Responsible Minerals Regulations

Section 1502 of the Dodd-Frank Act was the first piece of legislation to address the use of conflict minerals in products, with a focus on tin, tantalum, tungsten, and gold (3TGs) in supply chain reporting. In recent years, however, there has been a much broader expectation of supply chain transparency from manufacturers and distributors using responsible minerals in their operations.

This progression has been heavily influenced by geopolitical drivers, including ongoing conflict in the Democratic Republic of the Congo (DRC), sanctions against Russia, and concerns over China's dominance in the supply of critical minerals. These pressures have underscored the need for resilient and ethical supply chains that reduce the risk of disruption.

Key Terms

- **Conflict minerals:** The original 3TGs regulated under the Dodd-Frank Act.
- **U.S. critical minerals:** Materials essential for the energy transition and modern technology, which currently includes over 50 different materials.
- **Responsible minerals:** A broader, modern category of materials that includes conflict minerals, critical minerals, and other sustainability-linked materials, such as cobalt used in the automotive industry.



A Timeline of Escalating Expectations

2010

Section 1502 of the U.S. Dodd-Frank Act is passed: The foundational U.S. legislation requiring publicly listed companies to report on the origin of 3TGs in their supply chains.

- **Impact:** This act established the first major legislative requirement for 3TG due diligence for U.S. public companies, setting a new precedent for supply chain accountability.

2017

U.S. court ruling challenges Section 1502 reporting requirements: This ruling came from a lawsuit brought by the National Association of Manufacturers and led to a rollback of some requirements of Section 1502.

- **Impact:** While the ruling impeded parts of the original rule, a powerful market-driven shift for increased transparency and accountability was already underway. Leading companies voluntarily strengthened their responsible minerals programs to meet stakeholder demands, effectively raising the bar for the entire industry.

2021

2021: EU Conflict Minerals Regulation enters full effect: This regulation requires EU-based importers of 3TGs to conduct due diligence on their suppliers to ensure responsible sourcing.

- **Impact:** The regulation expanded responsible sourcing rules to regions and companies beyond the U.S. law.

2021

Uyghur Forced Labor Prevention Act (UFLPA) is introduced to the U.S. House of Representatives: Though the UFLPA isn't specific to minerals, it has a significant impact on the minerals supply chain due to its focus on raw materials (e.g., aluminum) sourced from China's Xinjiang region.

- **Impact:** The UFLPA transformed the risk of forced labor from an ethical concern into a critical trade compliance barrier. To address this, manufacturers need deep transparency and specific solutions that can uncover forced labor risks in their supply chains.

2023

EU Batteries Regulation (EUBR) is adopted: A landmark regulation that requires companies to conduct due diligence on raw materials in batteries, and holds producers responsible for batteries across their full life cycle through EPR obligations.

- **Impact:** A critical sign that responsible sourcing has moved beyond conflict minerals to become a foundational part of sustainability and supply chain resilience for manufacturers and distributors, especially those in the energy transition economy.

2025

Implementation begins for new minerals under EUBR: In-scope companies must report on their sourcing of cobalt, lithium, nickel, and natural graphite.

- **Impact:** These new requirements, along with increasing global sanctions, mean manufacturers must have robust and defensible traceability programs for an expanding list of materials.

Learn more about the EU Batteries Regulation in the Product Sustainability Handbook.

Download eBook

2025

Conflict in the eastern DRC continues to drive a major displacement crisis:[1] Conflict minerals, especially gold, may be funding armed groups when they're moved through smuggling and refining networks into global markets.

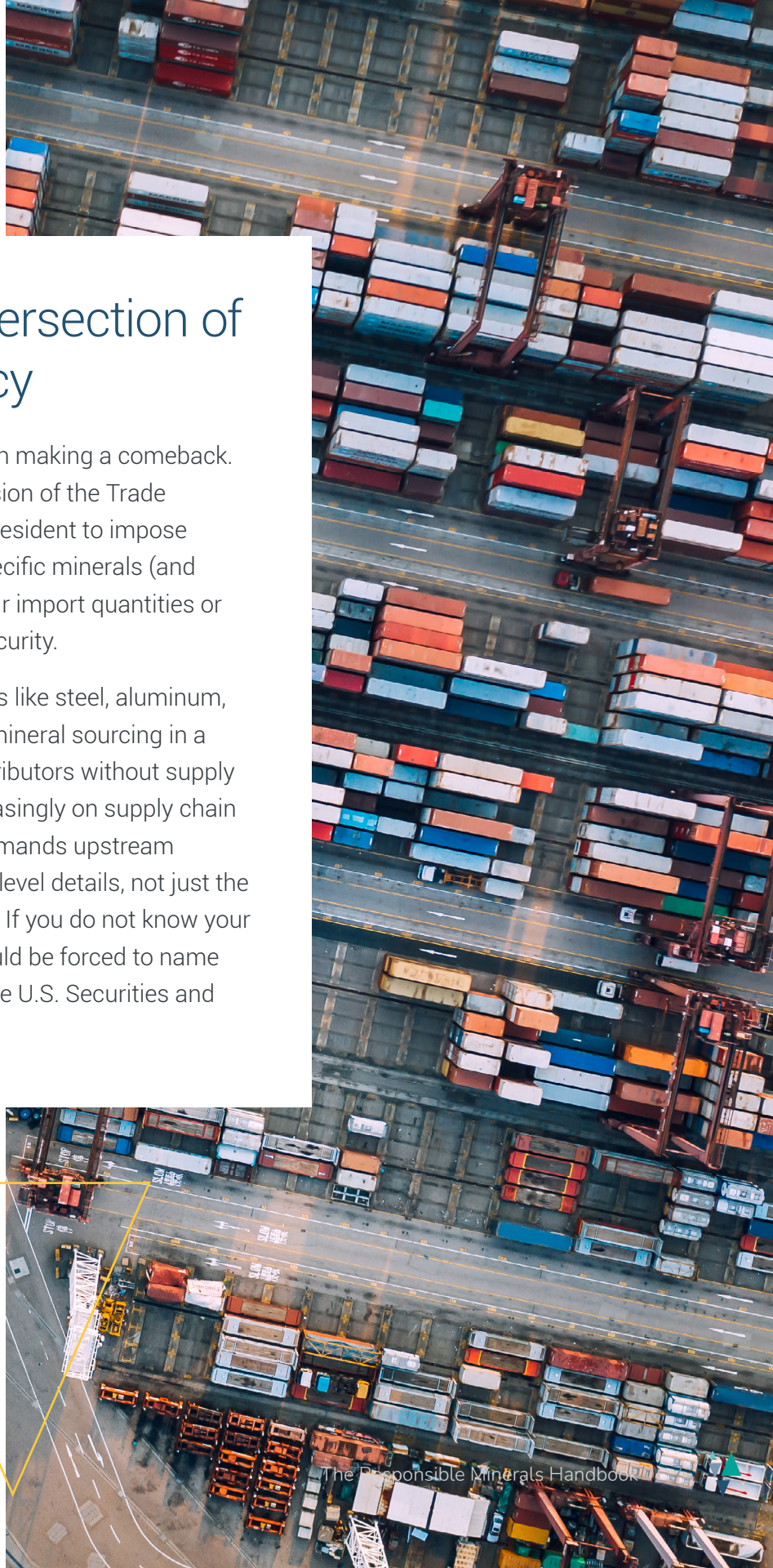
- **Impact:** The Sentry, an investigative and policy organization, is calling on the U.S., UK, and EU to increase pressure through sanctions and enforcement. Meanwhile, banks and refiners are tightening their due diligence. For manufacturers and distributors, this raises the bar on traceability and supplier transparency for higher-risk minerals and shipping routes.

[1]Lezh nev, S. (December 2025). U.S.-led Peace Deal Won't End War Without New Pressure. LinkedIn. https://www.linkedin.com/posts/sasha-lezhnev-073b823_our-statement-on-todays-congo-peace-signing-activity-7402375324845522944-YHEm/

Section 232: The Intersection of Trade & Transparency

In recent years, older legislation has been making a comeback. For example, U.S. Section 232 is a provision of the Trade Expansion Act of 1962 that allows the president to impose tariffs or other import restrictions on specific minerals (and their processed forms/derivatives) if their import quantities or circumstances threaten U.S. national security.

Section 232 can trigger tariffs on imports like steel, aluminum, and copper, and it is now colliding with mineral sourcing in a way that places manufacturers and distributors without supply chain visibility at risk. The focus is increasingly on supply chain transparency. Section 232 effectively demands upstream mapping for melt and pour and smelter-level details, not just the final point of substantial transformation. If you do not know your smelters or refiners (SORs) now, you could be forced to name them later, potentially to customs and the U.S. Securities and Exchange Commission (SEC).



CHAPTER 02



Now More Than Ever: Why Your Organization Needs a Robust Responsible Minerals Program

Risks around responsible minerals are intensifying. Yet manufacturers and distributors with complex global supply chains may have trouble accessing and managing the data they need to mitigate them. When origin and supplier data is incomplete or inconsistent, or teams cannot access it, it becomes harder to demonstrate compliance, meet customer requirements, and maintain supply chain continuity.

Without a strong, proactive responsible sourcing program, companies face:

- Contract and revenue loss
- Failed customer audits
- Import delays or seizures
- Supply chain disruption
- Enforcement actions
- Fines
- Sanctions
- Reputational damage
- Restricted market access

The urgent need for transparent and reliable country of origin (COO) data is reflected in both new and updated regulations such as the Uyghur Forced Labor Prevention Act (UFLPA) and EUBR. Meeting their evolving requirements depends on supply chain due diligence and traceability. This means manufacturers and distributors must treat responsible sourcing as an end-to-end program, not a set of isolated compliance tasks, if they want to keep up as the landscape changes.

Smart organizations are working to mitigate their risks now to protect their revenue and future growth. A proactive responsible minerals program helps reduce disruption, protect revenue, and improve readiness for regulatory and customer scrutiny.

Guidance on Artisanal & Small-Scaling Mining (ASM)

Understand the role of ASM in the responsible minerals supply chain, why it's critical to impoverished regions, and how to continue sourcing while protecting human rights.

Download Guide

This guide provides a strategic framework to move from early program stages to proactive resilience, so you can mitigate your risks before they affect your market access and long-term competitiveness.

The OECD Due Diligence Framework

The Organisation for Economic Co-operation and Development (OECD) provides a globally recognized, five-step due diligence framework that has become the de-facto industry standard for responsible mineral sourcing. It's a comprehensive set of guidelines that help companies create strong management systems to identify, mitigate, and publicly report on risks within their mineral supply chains.

1. **Strong Company Management Systems:** Companies must establish internal structures, policies, and management systems to guide their due diligence efforts. This includes creating a responsible sourcing policy and making it publicly available. Manufacturers should also define a clear vision of how they will achieve a conflict-free supply chain.

2. **Identify & Assess Risks in the Supply Chain:** Companies must actively identify and assess specific risks associated with their mineral sourcing. This is done by collecting upstream supply chain information, especially on smelters of sourced metals and minerals, and then cross-referencing this data in the Assent Sustainability Platform to identify potential smelter risks.

A core activity is performing a Reasonable Country of Origin Inquiry (RCOI) to gather detailed data for all mineral sources. Risk assessment considers several factors, including:

- The smelter's geographic proximity to the DRC or other conflict-affected and high-risk areas (CAHRAs)
- The mineral's country of origin
- The smelter's Responsible Minerals Assurance Process (RMAP) audit status
- Any credible evidence of unethical or conflict sourcing

Without this step, companies cannot confidently rule out potential connections to armed groups and human rights violations.

3. **Manage Risks:** This step is focused on strategies to mitigate identified risks effectively. Key actions include actively engaging with upstream suppliers to inform them of smelter risks and responsible sourcing options or alternatives. Manufacturers should also trace the origin of their materials to determine if they come from high-risk smelters, and identify which of their direct suppliers source from those facilities. If needed, companies must be prepared to change suppliers to achieve their due diligence goals.

What Are Conflict-Affected & High-Risk Areas (CAHRAs)?

A CAHRA is a country or region where there is a high risk of human rights violations or conflict connected to the extraction and processing of minerals. A non-exhaustive, regularly updated list of CAHRAs can be found **here.**



4. **Audit Due Diligence Practices:** Manufacturers should review industry-recognized third-party audits or assessments to confirm that the smelters in their supply chain align with responsible sourcing standards. These programs provide independent validation of the origins of the SOR's raw material inputs.
   A growing alternative is crowd-sourced origin validation: collecting material origin details from many independent sources. This "trust but verify" approach reduces reliance on any single supplier's information.

5. **Publicly Report on Due Diligence:** Reporting publicly on due diligence efforts ensures transparency and accountability to stakeholders, investors, governments, and consumers. Companies must prepare and submit any necessary reports, such as the annual Conflict Minerals Report required by the SEC for publicly traded companies. This reporting is commonly facilitated using standardized industry tools like the Conflict Minerals Reporting Template (CMRT), which helps companies perform due diligence and disclose smelter information in their supply chains.

Assent helps you automate CMRT data surveying to streamline the reporting process.

Learn More



CHAPTER 03



Why Smelters Are the Critical Pinch Point

Smelters are facilities that process raw ore into refined metals. Because they aggregate materials from diverse sources, they are the most effective control point for verifying the origin of minerals. However, a single high-risk smelter can jeopardize compliance across thousands of products and undermine an entire responsible sourcing program.

Assent determines a smelter is high-risk based on several key factors:

- **Geo-risk:** The smelter is located in or sources from a CAHRA.
- **Audit-related risk:** The smelter is not validated by a recognized, independent audit program, such as RMAP.
- **Peer assessment:** Public filings from other companies indicate potential red flags or concerns about the smelter's sourcing practices.
- **Sourcing risk:** The smelter is linked to credible evidence of other issues, such as environmental violations, human rights abuses, or being placed on a government sanctions list.

These factors are not isolated. A smelter in a high-risk geography (geo-risk) that is also not audited (audit-related risk) presents an exponentially greater threat of introducing sanctioned materials into a supply chain. This makes smelter validation a critical due diligence activity.



Download our guide to access an objective list of smelters of interest, based on the presence of documented risk factors.

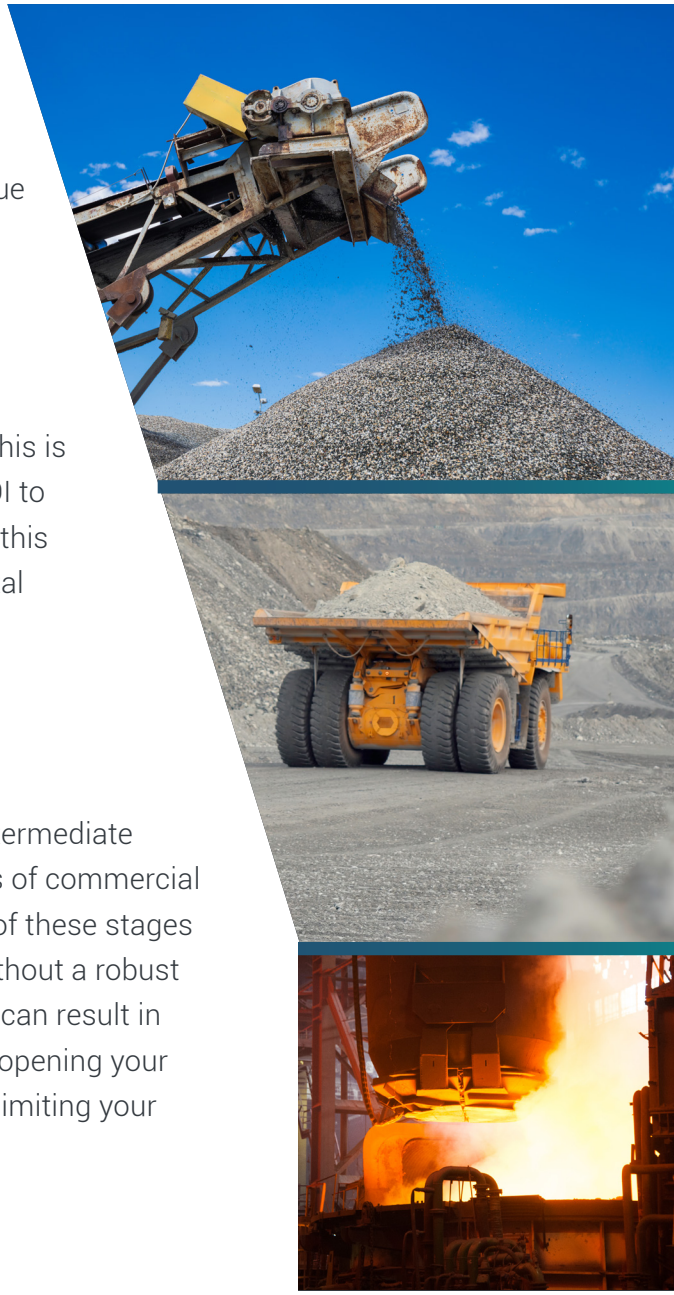
Get the List

Assessing mineral risk isn't just a back-office compliance task. The risks to your organization reach far beyond Section 1502 of the Dodd-Frank Act, threatening your market access and brand integrity. And responsible sourcing is anything but easy. Several challenges manufacturers and distributors face in managing their responsible minerals programs include:

- **Smelter due diligence and risk analysis**: This process is crucial for establishing traceability, assessing risk levels, and ensuring compliance readiness. Identifying and validating smelters is a key step in any defensible due diligence program.
- **Supplier transparency and engagement**: Collecting accurate and timely data from deep within a complex, multi-tiered supply chain is a constant challenge. Your suppliers need to be educated on what is required from them and engaged in the process of data management to fully understand and support your program goals. They also need the right support from program and regulatory experts, in a language they understand, to help them navigate the changing landscape and meet your requirements with reliable data.
- **Expanding regulatory scope:** The list of regulated materials is growing. The U.S. Critical Minerals List, for example, covers over 50 different minerals and counting.
- **Complex COO requirements:** Tracing minerals through consolidation points at smelters and traders, for example, and across international borders is an intricate process, making it difficult to verify the precise origin of raw materials.
- **Reputational damage**: Public exposure and the legal ramifications of purchasing illicit sources can lead to severe consumer backlash, negative media coverage, and targeted campaigns from non-governmental organizations (NGOs).
- **Legal and financial penalties**: Non-compliance can result in significant financial penalties, trade restrictions, and sanctions that disrupt business operations.
- **Loss of market access:** Without defensible due diligence and proof of compliance, manufacturers risk having their goods detained at borders or being barred from key markets entirely.
- **Loss of customers:** Corporate buyers and original equipment manufacturers (OEMs) demand proof of responsible sourcing from their suppliers as a condition of doing business.

You Need Upstream & Downstream Data

As minerals flow from the ground to the market, each tier of the value chain adds layers of complexity and potential risk. Below, see the points you need to pay attention to and gather data from.



Extraction or "The Mines"

At the beginning of the value chain is the mine itself. This is the first and most critical stage for conducting an RCOI to determine where the raw ore originates from. Risks at this stage often involve human rights abuses, environmental degradation, and the financing of conflict.

Processors, Consolidation Points & Distribution

The next steps transform raw materials into usable intermediate forms and aggregate materials, and cover the logistics of commercial handoffs that move materials to the next stage. Each of these stages represents a critical point where data can get "lost" without a robust supply chain data management program. Data losses can result in a lack of visibility in the journey from mine to product, opening your company up to regulatory and customer scrutiny and limiting your ability to apply the "trust but verify approach."

Smelters

Smelters and refiners represent the "pinch point" of the mineral supply chain. They consolidate ore from numerous mines, making them the last viable point to determine a mineral's origin before it is mixed with other materials. Because of this central role, smelter due diligence is a cornerstone of any effective responsible sourcing program.

Traders, Plating Material & Application

After smelting, materials often move through traders, are converted into plating-ready inputs, and are ultimately used in specific product applications. Each introduces new handoffs where origin and chain of custody details can become harder to verify. Traders may aggregate or re-route materials from multiple sources; plating materials can be treated as "minor" inputs despite carrying high due diligence expectations; and application-level visibility is what links mineral content to the exact parts and processes in your products. Collecting data at all three points helps manufacturers maintain traceability from smelter to finished product, target supplier outreach where minerals actually appear, and produce defensible reporting that stands up to regulatory and customer scrutiny.



Market Entry

Companies that place the final product on the market are under the brightest spotlight. Regulators, investors, and consumers hold these organizations accountable for the integrity of their entire supply chain, demanding transparent reporting on human rights, traceability, and overall sustainability.



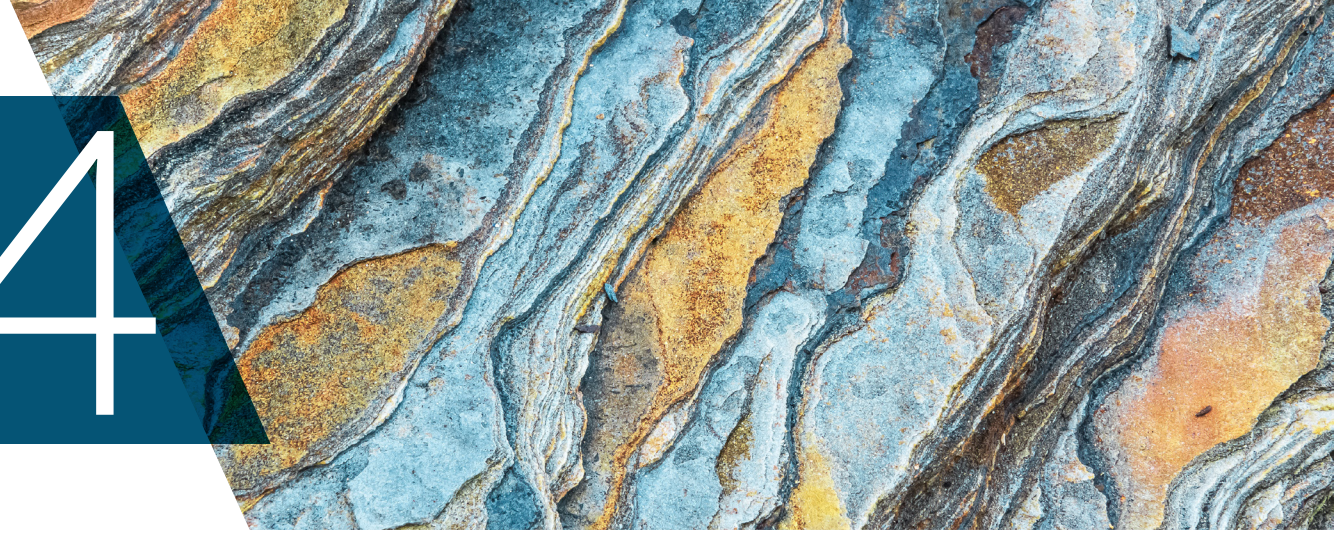
Cautionary Case Study

In 2022, the African Gold Refinery Limited (AGR) was sanctioned by the U.S. Office of Foreign Assets Control for its direct or indirect role in supporting armed groups involved in activities that threaten the stability of the DRC through the illicit trade in the DRC's natural resources.

AGR was identified as having both geo-risk — being located in Uganda, an adjoining country to the DRC — and significant sourcing risk due to documented ties to sanctioned entities. This single facility was implicated in the illicit gold trade, and the beneficial owner was also sanctioned by the European Council, highlighting the deep corruption and severe human rights risks that can be hidden within a manufacturer's supply chain.[2]

[2] Reuters. (2022, March 18). U.S. imposes sanctions over illicit exports of gold from Congo. https://www.reuters.com/world/africa/us-imposes-sanctions-over-illicit-exports-gold-congo-2022-03-18/

CHAPTER 04



Building a Resilient Responsible Sourcing Program

Avoiding the expanding risks of the minerals trade requires moving beyond checkbox compliance. A resilient program is built on proactive due diligence, deep supply chain visibility, and the strategic use of standardized tools and expert partners. Proactive leaders recognize this as an opportunity to transform a compliance obligation into a source of competitive advantage and operational resilience.

Best Practices for Reducing Responsible Minerals Risk

Building a strong responsible minerals program requires alignment with internationally recognized best practices that ensure consistency, transparency, and continuous improvement.

Assent's Responsible Minerals solution supports each stage of the compliance process, combining advanced technology with deep human expertise to help companies build resilient and defensible programs. Here's how:

Follow OECD due diligence guidance: The OECD framework is the international standard for responsible minerals sourcing. Adhering to its five-step process helps companies establish strong management systems, identify and assess supply chain risks, respond to findings, and report on their progress.

How Assent helps: Assent's team of regulatory experts provides ongoing guidance on due diligence, risk assessment, and reporting. For example, the Assent Smelter Validation Program leverages a proprietary database of over 3,000 smelter profiles and an advanced risk-scoring methodology to provide real-time, actionable data on smelter risk. The program conforms with the OECD Due Diligence Guidance.

Use standardized reporting tools: Collecting consistent and comparable data from suppliers is essential. Industry-standard templates, like the CMRT and Extended Minerals Reporting Template (EMRT), streamline this process.

How Assent helps: Our solution ingests CMRTs and EMRTs, and automates the reporting process so you can easily collect standardized, validated, and usable conflict minerals data from deep in your supply chain.

Engage suppliers proactively: An effective program depends on high-quality data, which can only be collected through proactive and continuous supplier engagement. This involves clear communication, education, and support to help suppliers provide the necessary traceability information.

How Assent helps: Assent's Managed Services and multilingual Supplier Support teams act as an extension of your company's compliance department. They educate suppliers, clarify requirements, and provide support in suppliers' native languages to increase response rates and improve data quality.

Verify smelters: Because smelters are the critical pinch point in the supply chain, their status must be verified. Companies can do this through supplier engagement and/or choosing to source primarily from smelters participating in recognized, independent audit programs, such as the RMAP or the London Bullion Market Association (LBMA).

How Assent helps: Assent's Smelter Validation Program ensures your conflict minerals program is empowered with the most up-to-date smelter data, helping you mitigate the risks posed by conflict minerals in your supply chain.



CHAPTER 05



A New Era of Accountability

Responsible minerals compliance is an essential part of today's supply chain sustainability landscape, and investing in a robust responsible minerals program has become a business imperative. Proactive leaders who prioritize deep supply chain visibility and due diligence are better positioned to:

- Protect your supply chains against disruption and sanctions
- Secure market access by meeting growing regulatory demands in the U.S. and EU
- Build customer trust and create a competitive advantage by demonstrating a real commitment to ethical sourcing
- Strengthen investor confidence by maximizing nonfinancial evaluations
- Have a strong foundation for other supply chain due diligence exercises

Assent's Responsible Minerals solution supports each stage of the compliance process — from data collection and supplier engagement to smelter validation and audit reporting — so manufacturers like you can maintain compliance, mitigate risk, and respond confidently to stakeholder demands.

Book a customized demo today to see why our solution is right for your business.

Book a Demo



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