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Motorola Taps Product Compliance Capability
for Conflict Minerals

By : Jim Brown | President | Tech-Clarity

The Conflict Minerals Challenge

The US Dodd-Frank act requires unprecedented reporting on a number of materials used in manufacturing. These "**3TG**" mineral ores – used to produce tantalum, tin, tungsten, and gold – are commonly used in today's electronics and many other products. The mining of these materials is believed to be funding armed groups in the Democratic Republic of Congo (DRC) who control the mining of the ores.

The legislation is being challenged in court, but manufacturers can't afford to wait for the outcome. They must act to mitigate risks to business continuity and company reputation. At the same time, they have to address the regulation cost effectively, despite the fact that estimated costs for a large company are up to $2 million for the 2014 filing alone*. This eBook explains how Motorola is responding to the challenge.

* Green Research - The Costs and Benefits of Dodd-Frank Section 1502

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Conflict Minerals in Context

Conflict Minerals legislation is one of the newest challenges in an already complex, global web of product compliance mandates. The regulation requires companies to determine the reasonable country of origin for source minerals and conduct due diligence to show their supply chain is "conflict free." The legislation includes escalating requirements (see image) currently leading to the expiration of the "undeterminable" source status in 2015.

Conflict Minerals Legislation Expanding Globally
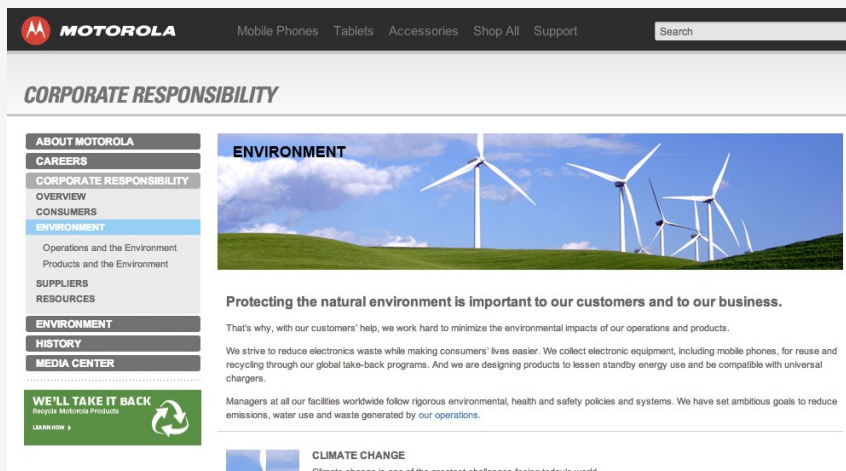
- US Dodd-Frank Act
- Canada Bill C-486
- EU Certification
- Australia Due Diligence Guidelines
- Next ???

Conflict Minerals is just the latest in a long list of product compliance challenges. It's notable because it requires detailed supply chain knowledge in addition to product data.
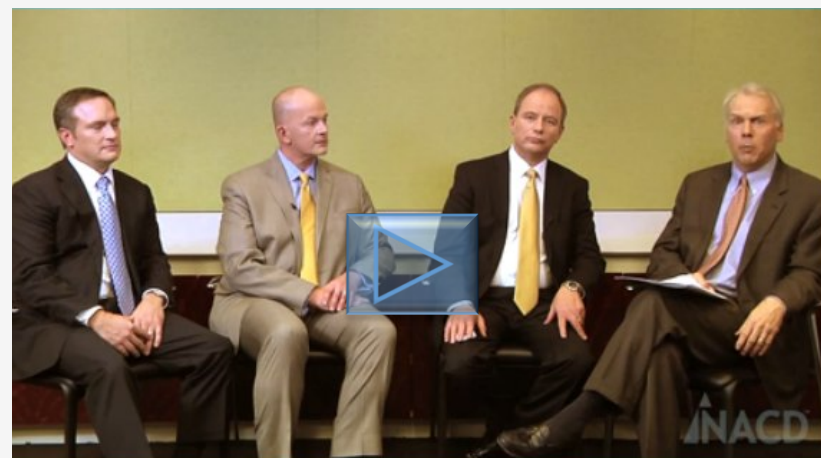
Motorola Embraces Corporate Responsibility

Tech-Clarity has observed Motorola's sustainability practices over the years. We follow their progress directly, through their public statements, and from their presentations. We are always impressed with Motorola's continued commitment to stay ahead of the regulations. That's not easy, given the fact that Motorola Mobility reportedly has more than 50,000 products, hundreds of thousands of parts, and thousands of suppliers!

Motorola takes a proactive leadership position in corporate responsibility. Conflict Minerals is no exception. They made a strong statement on their website, with a strong published policy and set out clear directives to their suppliers.

"Motorola has really sought to seek the high road in materials compliance and go beyond the requirements."

Bill Olson | Director Office of Sustainability and Stewardship Mobile Devices | Motorola

Watch NACD BoardVision Panel on Conflict Minerals

Motorola's Sustainable Compliance Process

Motorola not only embraces corporate social responsibility, they put processes and technology in place to cost-effectively mitigate compliance risk. Motorola takes a holistic approach instead of addressing compliance project-by-project or regulation-by-regulation because they know there will always be more regulations coming. As one Motorola research participant explains, *"REACH showed us there will be continuing efforts to add more compliance regulations to things we ship to different locations around the world."* Their approach, then, is designed to address whatever regulations come next, similar to Tech-Clarity's Sustainability Framework.

In 2009 Tech-Clarity reported that most companies gathered data on a project/regulation basis. Only about one-quarter (27%) of manufacturers targeted full material disclosure. Motorola requires full disclosure from their suppliers through their Controlled and Reportable Material Disclosure Specification (MW18). As the Motorola website states, *"We require our suppliers to disclose banned, controlled and reportable substances as well as recycled material content for each part supplied to Motorola Mobility."* Motorola knows what's in their products, how to identify it, and how to report on it. **Based on these capabilities, Motorola is better prepared to address conflict minerals than most companies.**
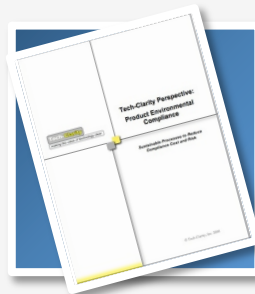
"We needed a worldwide approach to deal with REACH, WEEE, CMM (China RoHS), RoHS."

Principal Software Engineer for Environmental Compliance | Motorola | 2009

"We went beyond the regulations to create a material disclosure system, MW18, that discloses all substances in our parts."

Bill Olson | Director Office of Sustainability and Stewardship Mobile Devices | Motorola

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Motorola's Responsive (and Responsible) Supply Chain

"Our suppliers benefit from (our consistent approach) because we're approaching this problem in a very similar way that we have for 15 years for RoHS. Motorola asking these questions isn't a new thing for them, we're not querying them for the first time."

Bill Olson | Director Office of Sustainability and Stewardship Mobile Devices | Motorola
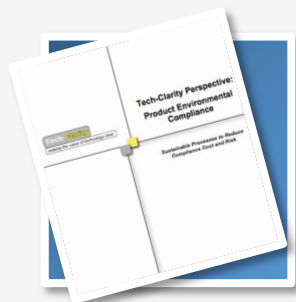
"The standards-based spreadsheet we use walks the manufacturers through filling out and doing data integrity checks, and makes them report down to the CAS number at PPM % or mass level for each compound. Once a part has been graded, suppliers are not contacted again unless Motorola's standard changes."

Principal Software Engineer for Environmental Compliance | Motorola | 2009

No company can tackle product compliance alone. Motorola invested early on to develop a responsible supply chain. They educated their suppliers and put in place a consistent, repeatable, and auditable process with teeth to support RoHS. Motorola makes it clear a MW18 specification is required to qualify a part for purchase and that supplier payments won't be issued without it. They worked with suppliers and adopted a standard reporting format, IPC1752, to reduce the burden on suppliers and streamline data collection.

The Motorola supply chain understands the need to provide product data. When Motorola recognized the need to gather information for Dodd-Frank, they simply extended the supply chain processes and procurement policies put in place for RoHS and REACH instead of inventing a new process. Again, they leveraged a standardized template developed by industry to ease the burden on suppliers and ensure consistent data capture. Now, as a presentation by Motorola's Wilhelm Janisch explains, *"New parts must have an EICC form. Any part intended for use by Motorola must comply with this policy. Noncompliant parts will not be approved by PS&C after March 31, 2013."*

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Motorola's Robust Sustainability Infrastructure

Motorola recognized the need for automation to drive efficient, repeatable, and cost-effective compliance. They couldn't manage with inefficient and time-consuming spreadsheets and there was no way to address RoHS at scale with a manual approach. Motorola leverages automation to analyze multiple regulations using BOM information from their PLM system to understand product configurations. They address the tremendous data collection challenge through automated outreach and response to manage thousands of suppliers.

Their compliance infrastructure was proven by addressing RoHS. **Motorola reduced the average cycle time associated with a new supplier item from 28 days to 3 days** according to a published case study. They also proved the value could be extended to new regulations by expanding to REACH. *"Since detailed substance data is what's required for REACH, we had all the information we needed for REACH. We just had to put together specific reports,"* a research participant stated. Conflict minerals, then, is being addressed as an extension of Motorola's existing processes and infrastructure.

Tech-Clarity's Product Compliance Framework

Tech-Clarity advises manufacturers to adopt sustainable approaches and a supporting infrastructure to address varied product compliance demands. Our research shows this provides better compliance at lower cost. Motorola did this, and is one of the companies we based our recommendations on.

Motorola Is Ready to Address Conflict Minerals

In 2009, Tech-Clarity observed that *"Many companies are still addressing compliance on a project basis, and far too many are collecting insufficient information, such as simple letters of compliance, that will fall short of the needs generated by upcoming regulations like REACH. Those with a systematic approach will continue to lead, providing better product compliance at a lower total cost."* Motorola achieved this vision. They can extend their materials compliance capabilities to meet the conflict minerals requirements because they already know what's in their products, they have a responsive supply chain, and they have adaptable infrastructure and automation in place.

Motorola is well positioned to meet the 2014 reporting requirements and the 2015 demand for part level data when "Undeterminable" filing expires. Motorola is far ahead of many of their competitors because of the infrastructure they have in place. These capabilities enable them to confidently state that they will be ready to comply with Dodd-Frank, as the Motorola Corporate Responsibility Website states, *"Motorola Mobility will be fully compliant with the SEC reporting requirements before the deadline for submission of 31st May 2014."*

Motorola is extending the following key capabilities to confidently meet today's conflict minerals requirements.

- Strong corporate sustainability mindset
- Proven, scalable compliance processes
- Rich part and supplier data
- Responsive supply chain
- Comprehensive automation and infrastructure
- Experience extending capabilities to new regulations

Tech-Clarity expects Motorola to have better compliance at lower cost due to their sustainable approach.

"We can have a compliance verdict for any regulation, anywhere in the world, for any component, subassembly, or product we produce. And we get used to looking at the problem in a consistent, thorough way."

Bill Olson | Director Office of Sustainability and Stewardship Mobile Devices | Motorola

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About the Author and the Research

Jim Brown is the President of Tech-Clarity, an independent research and consulting firm that specializes in analyzing the business value of software technology and services. Jim has over 20 years of experience in software for the manufacturing industries. He has a broad background including roles in industry, management consulting, the software industry, and research.

Jim's experience spans enterprise applications including PLM, ERP, quality management, compliance, service lifecycle management, manufacturing, supply chain management, and more. Jim is passionate about improving product innovation, product development, and engineering performance through the use of software technology.

Jim is an experienced researcher, author, and public speaker and enjoys the opportunity to speak at conferences or anywhere he can engage with people with a passion to improve business performance through software technology.

This eBook shares Tech-Clarity's knowledge of Motorola's sustainability capability and incorporates information from existing, published sources, including:

- Tech-Clarity Perspective: Product Environmental Compliance – Sustainable Processes to Reduced Compliance Cost and Risk (including an interview Gerald Sprague, Principal Software Engineer for Environmental Compliance, Motorola, 2009)

- NACD panel interview including Bill Olson, Director Office of Sustainability and Stewardship Mobile Devices, Motorola

- Motorola develops greener products, more efficiently, with Windchill Product Analytics, a published case study

- A presentation on Conflict Minerals by Motorola's Wilhelm Janisch