

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM SD
SPECIALIZED DISCLOSURE REPORT

Harvard Bioscience, Inc.
(Exact name of the registrant as specified in its charter)

DELAWARE
(State or Other Jurisdiction of
Incorporation)

001-33957
(Commission File Number)

04-3306140
(IRS Employer Identification Number)

84 October Hill Road, Holliston, MA
(Address of Principal Executive Offices)

01746
(Zip Code)

Michael A. Rossi **(508) 893-8999**
(Name and telephone number, including area code, of the person to contact in connection with this report.)

Check the appropriate box to indicate the rule pursuant to which this form is being filed, and provide the period to which the information in this form applies:

Rule 13p-1 under the Securities Exchange Act (17 CFR 240.13p-1) for the reporting period from January 1 to December 31, 2019.

Section 1 - Conflict Minerals Disclosure

Item 1.01 Conflict Minerals Disclosure and Report

Harvard Bioscience, Inc. (“Harvard Bioscience” or “the Company”) has evaluated its current product lines and has determined in good faith that during 2019 it manufactured or contracted to manufacture products as to which columbite-tantalite (coltan), cassiterite, gold, wolframite and their derivatives, which are limited to tantalum, tin, and tungsten (herein referred to as “Conflict Minerals”) are necessary to the functionality or production of such products (herein referred to as “Covered Products”). Based on such determination, Harvard Bioscience conducted a reasonable country of origin inquiry, or RCOI, that was reasonably designed to determine whether any of the Conflict Minerals in the Covered Products originated in the Democratic Republic of the Congo or an adjoining country (the Republic of the Congo, the Central African Republic, South Sudan, Uganda, Rwanda, Burundi, Tanzania, Zambia or Angola); or were from recycled or scrap sources.

Following the RCOI, Harvard Bioscience exercised due diligence on the source and chain of custody of its applicable products. Information on the RCOI, steps we have taken to exercise due diligence on the source and chain of custody of any Conflict Minerals in the Covered Products and the results of this due diligence, are disclosed in the Conflict Minerals Report filed as Exhibit 1.01 to this Form SD.

Conflict Minerals Disclosure

A copy of Harvard Bioscience’s Conflict Minerals Report is filed as Exhibit 1.01 hereto and is publicly available at: <http://investor.harvardbioscience.com/corporate-governance.cfm>. The content of any website referred to in this Form SD is included for general information only and is not incorporated by reference in this Form SD.

Item 1.02 Exhibit

Harvard Bioscience, Inc. has filed its Conflict Minerals Report as Exhibit 1.01 to this Form SD.

Section 2 - Exhibits

Item 2.01 Exhibits

[Exhibit 1.01](#) [Conflict Minerals Report as required by Items 1.01 and 1.02 of this Form SD](#)

Harvard Bioscience, Inc.

Conflict Minerals Report

For the Year Ended December 31, 2019

Forward Looking Statements

Forward-looking statements contained in this Report are made based on known events and circumstances at the time of release, and as such, are subject in the future to unforeseen uncertainties and risks. Statements in this Report which express a belief, expectation, or intention, as well as those that are not historical fact, are forward-looking statements, including statements related to the Company's compliance efforts and expected actions identified in this Report. These forward-looking statements are subject to various risks, uncertainties and assumptions, including, among other matters, the Company's customers' requirements to use certain suppliers, the Company's suppliers' responsiveness and cooperation with the Company's due diligence efforts, the Company's ability to implement improvements in its conflict minerals program and the Company's ability to identify and mitigate related risks in its supply chain. If one or more of these or other risks materialize, actual results may vary materially from those expressed. For a more complete discussion of these and other risk factors, see the Company's other filings with the Securities and Exchange Commission ("SEC"), including its Annual Report on Form 10-K for the year ended December 31, 2019 and subsequent Quarterly Reports on Form 10-Q. The Company makes these statements as of the date of this disclosure, and undertakes no obligation to update them unless otherwise required by law.

Conflict Minerals Disclosure

This report for the year ended December 31, 2019 is presented to comply with Rule 13p-1 under the Securities Exchange Act of 1934, as amended (the "Rule"). The Rule was adopted by the Securities and Exchange Commission ("SEC") to implement reporting and disclosure requirements related to conflict minerals as directed by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act"). The Rule imposes certain reporting obligations on SEC registrants whose manufactured products contain conflict minerals which are necessary to the functionality or production of their products. Conflict Minerals are defined as cassiterite, columbite-tantalite, gold, wolframite, and their derivatives, which are limited to tin, tantalum, tungsten, and gold ("Conflict Minerals") for the purposes of this report. These requirements apply to registrants whatever the geographic origin of the conflict minerals and whether or not they fund armed conflict.

As described in this report, Harvard Bioscience, Inc., a Delaware corporation (herein referred to as "Harvard Bioscience," the "Company," "we," "us," or "our") has reason to believe that some of the Conflict Minerals present in its supply chain may have originated in the Covered Countries. For purposes of this report, Covered Countries refers to the Democratic Republic of the Congo (the "DRC") and adjoining countries, defined as any country that shares an internationally recognized border with the Democratic Republic of the Congo. We are unable with absolute assurance to determine the origin of the Conflict Minerals in our products and therefore cannot exclude the possibility that some may have originated in the Covered Countries.

1. Company Overview

This report has been prepared by management of Harvard Bioscience. The information includes the activities of all majority-owned subsidiaries as of December 31, 2019.

Harvard Bioscience is a leading developer, manufacturer and seller of technologies, products and services that enable fundamental research, discovery, and pre-clinical testing for drug development. The Company's customers range from renowned academic institutions and government laboratories, to the world's leading pharmaceutical, biotechnology and contract research organizations. With operations in North America and Europe, the Company sells through a combination of direct and distribution channels to customers around the world.

Conflict Minerals Policy

We adopted a conflict minerals policy in 2013 which is publicly available at <http://investor.harvardbioscience.com/corporate-governance.cfm>.

2. Product Description

As of December 31, 2019, our broad core product range was organized into two commercial product families: Pre-clinical devices and instruments and Cellular and Molecular technologies. As of December 31, 2019, we primarily sold our products under brand names, including Harvard Apparatus, KD Scientific, Hofer, Biochrom, BTX, Warner Instruments, MCS, HEKA, Hugo Sachs Elektronik, Panlab, Coulbourn Instruments, DSI, and CMA Microdialysis. Our products consist of instruments, consumables, and systems made up of several individual products. We manufacture our products at our locations in the United States, Germany, Sweden and Spain. Our broad and complex product range may contain conflict minerals within the following components:

- Tantalum, used in capacitors,
- Tin, used in soldered components,
- Tungsten, used in coatings, alloys, heating elements and electrodes,
- Gold, used in circuit boards, electrodes and electronic components.

3. Description of Reasonable Country of Origin Inquiry, or RCOI

We began our RCOI by completing a supplier list extraction from our Vendor List. This list was then filtered to remove:

- Service Providers/Suppliers
- Indirect Materials Suppliers
- Inactive Suppliers (minimum 2 years since last purchase)

This ensures that all suppliers surveyed provided items to Harvard Bioscience that were used in final products in the year 2019. Once the filtering was completed, we populated the list with contact information and this list was then provided to Assent Compliance (“Assent”), our third-party service provider, for upload to their Assent Compliance Manager SaaS system (“ACM”). It was deemed appropriate to not further filter this list based on the necessity of the presence of Conflict Minerals in the products as we could not definitively determine the presence or absence of Conflict Minerals in all parts supplied. The survey employed the Responsible Minerals Initiative’s (RMI’s Conflict Minerals Reporting Template (the “CMRT”), version 5.12, originally developed by the Responsible Business Alliance (RBA) and The Global e-Sustainability Initiative. The CMRT allows for further scoping as they ask suppliers whether any of the Conflict Minerals are intentionally added and if they are necessary to the functionality or production of their products. Assent conducted additional analysis of the supply chain and such analysis combined with supplier feedback, allowed Assent and Harvard Bioscience to remove additional suppliers from scope of the conflict minerals regulation. The factors considered in Assent’s secondary analysis and the information provided that removed these suppliers from scope included:

- The product they supply is packaging. (Labels do not count as packaging)
- Parts that do not end up in the final product.
- Test Labs (i.e. Providers that test the resistance or durability of a product)
- Service Providers (i.e. any supplier that provides a service but not an actual physical part).
- Any supplier who has not supplied anything to Harvard Bioscience, Inc., in the last 2 years.

Assent then conducted the supplier survey portion of the RCOI. During the supplier survey, suppliers were contacted via the ACM, a SaaS platform that enables its users to complete and track supplier communications as well as allow suppliers to upload completed CMRTs directly to the platform for assessment and management. Non-responsive suppliers were contacted a minimum of three times by ACM and then were also managed by the Assent Compliance team in one on one communications. This includes two to three direct follow ups from that team. Assent’s communications with suppliers included training and education on the completion of the CMRT to alleviate any remaining confusion with suppliers. All of these communications were monitored and tracked in Assent’s system for future reporting and transparency.

The program continues to include automated data validation on all submitted CMRTs. The goal of data validation is to increase the accuracy of submissions and identify any contradictory answers in the CMRT. This data validation is based on questions within the declaration tab of the CMRT which helps to identify areas that require further classification or risk assessment, as well as understand the due diligence efforts of suppliers. The results of this data validation contribute to the program’s health assessment and are shared with suppliers to ensure they understand areas that require clarification or improvement. As of May 11, 2020, there were 4 (0.3%) invalid supplier submissions that could not be corrected.

As of May 18, 2020, there were 1,217 suppliers in scope of the conflict minerals program and 533 provided a completed CMRT. The Company’s total response rate for this reporting year was 44%.

Assent compared the list of smelters and refiners provided in our suppliers’ responses to the lists of smelters maintained by the RMI and, if a supplier indicated that a facility was certified as conflict-free, confirmed that the facility was listed on RMI’s list of validated conflict free smelters and refiners of 3TGs. Our suppliers identified a total of 305 smelters and refiners that appear on the lists maintained by RMI. Of these 305 smelters and refiners, 235 are validated as conflict free by RMI or a cross-recognized initiative, and, based on information provided by RMI, a further 8 have agreed to undergo or are currently undergoing a third-party audit. Most of the CMRTs we received were made on a company or division level basis which did not allow us to identify which smelters or refiners listed by our suppliers actually processed the 3TGs contained in our products. Based on the RCOI, we had reason to believe that some of the 3TGs may have originated from the Covered Countries, therefore, in accordance with the Rule, performed due diligence on the source and chain of custody of the conflict minerals in question

4. Due Diligence Process

4.1 Design of Due Diligence

Our due diligence measures have been designed to conform, in all material respects, with the framework in The Organization for Economic Co-operation and Development (“OECD”) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (the “OECD Guidance”) and the related Supplements for Conflict Minerals.

The Guidance identifies five steps for due diligence that should be implemented and provides guidance as to how to achieve each step. We developed our due diligence process to address each of these five steps, namely:

1. Establishing strong company management systems regarding conflict minerals;
2. Identifying and assessing risks in our supply chain;
3. Designing and implementing a strategy to respond to identified risks in our supply chain;
4. Utilizing independent third-party audits of supply chain diligence; and
5. Publicly reporting on our supply chain due diligence

We are a downstream supplier, many steps removed from the mining of 3TG. A large number of suppliers, through multiple tiers of distribution, supply the components and materials integrated into our products. Furthermore, we do not purchase raw ore or unrefined conflict minerals or make purchases from the Covered Countries. The origin of the conflict minerals cannot be determined with any certainty once the raw ores are smelted, refined and converted to ingots, bullion or other conflict mineral containing derivatives. The smelters and refiners consolidate raw ore and represent the best actors in the total supply chain to possess knowledge of the origin of the ores they procure.

The OECD Guidance specifies that the requirements for compliance should reflect a company’s position in the supply chain. In particular, the OECD Guidance states that the implementation of due diligence should be tailored to a company’s activities and relationships and that the nature and extent of due diligence may vary based on a company’s size, products, relationships with suppliers and other factors. Due to practical difficulties associated with supply chain complexities, the OECD Guidance advises that downstream companies exercise due diligence primarily by establishing controls over their immediate suppliers. Accordingly, we rely primarily on our “tier 1” (direct) suppliers to provide information with respect to the origin of the conflict minerals contained in the components and materials supplied to us.

4.2 Management Systems

Internal Team

Harvard Bioscience has established a management system for conflict minerals. Our management system includes a committee selected by the Chief Financial Officer of the Company as well as executive-level representatives and a team of subject matter experts from relevant functions such as:

- Quality
- Purchasing
- Finance
- Engineering

The team of subject matter experts is responsible for implementing our conflict minerals compliance strategy. Senior management is briefed about the results of our due diligence efforts on a regular basis.

The Company also uses a third-party service provider, Assent, to assist with evaluating supply chain information regarding 3TGs, identifying potential risks, and in the development and implementation of additional due diligence steps that the Company will undertake with suppliers in regard to conflict minerals.

The Company leverages Assent’s Managed Services in order to work with dedicated program specialists who support Harvard Bioscience’s conflict minerals program. The Company communicates regularly with the Assent team in order to receive updates on program status. Each member of Assent’s Customer Success team is trained in conflict minerals compliance and understands the intricacies of the CMRT and conflict minerals reporting, as well as Section 1502 of the Dodd-Frank Act.

Control systems

As we do not typically have a direct relationship with Conflict Minerals smelters and refiners, we are engaged and actively cooperate with other major manufacturers in our sector and other sectors. Controls include, but are not limited to, the use of the CMRT as the data collection format for our suppliers, our Code of Business Conduct and Ethics which outlines certain expected behaviors for all Harvard Bioscience employees. In addition, we rely on our direct suppliers to provide information on the origin of the Conflict Minerals contained in components and materials supplied to us – including sources of Conflict Minerals that are supplied to them from lower tier suppliers.

Supplier Engagement

With respect to the OECD requirement to strengthen engagement with suppliers, we have, through Assent, provided education on the Conflict Minerals regulation as well as the expectations of the law and for a continued business relationship. This year, we put a stronger emphasis on supplier education and training. To accomplish this, we utilized Assent's learning management system, Assent University, and provided all in-scope suppliers access to their Conflict Minerals training course. This training is tracked and evaluated based on completion. All suppliers are encouraged to complete all modules within this course.

Grievance Mechanism

Various communication channels exist to serve as grievance mechanisms for early-warning risk awareness. We have multiple longstanding grievance mechanisms whereby employees (internal) and suppliers (external) can report violations of our policies. This includes , but is not limited to our whistleblower policies that are part of our Code of Business Conduct and Ethics policy located on our website at <http://investor.harvardbioscience.com/corporate-governance.cfm>.

Maintain Records

Our existing policy related to relevant documentation of our conflict mineral compliance process requires that documentation will be retained for a period of at least five years. We store all of the information and findings from this process in a database that can be audited by internal or external parties.

4.3 Identify and assess risk in the supply chain

Because of the complexity of our products, and the depth, breadth, and constant evolution of our supply chain, it is difficult to identify actors upstream from our direct suppliers. Risks are identified automatically in ACM based on criteria established for supplier responses in the Conflict Policy document and Management System.

All of the information and findings from this process are stored in a database that can be audited by internal or external parties.

Certain of the responses to the surveys included the names of facilities listed by the suppliers as smelters or refiners. We compared, via Assent, each facility listed in the responses to the lists of smelters and refiners maintained by the RMI to verify the existence of the facility and to determine whether the facility has met the requirements of the RMI's Responsible Minerals Assurance Process (RMAP) and is considered Compliant to that protocol.

Each facility that meets the RMI definition of a smelter or refiner of a 3TG mineral is assigned a risk of high, medium or low based on the following scoring criteria:

1. Geographic proximity to the DRC and covered countries;
2. Responsible Minerals Assurance Process (RMAP) audit status;
3. Known or plausible evidence of unethical or conflict sourcing;
4. Peer Assessments conducted by credible third-party sources;
5. Known mineral source country of origin.

Based on this criteria, certain facilities have been identified as being of highest concern to the supply chain. When these facilities were reported on a CMRT by one of the suppliers surveyed, risk mitigation activities were initiated. Through Assent, submissions that include any of the above facilities immediately produce a receipt instructing the supplier to take their own risk mitigation actions, including submission of a product specific CMRT to better identify the connection to products that they supply to Harvard Bioscience, and escalating up to removal of these high risk smelters from their supply chain.

As per the OECD Due Diligence Guidance, risk mitigation will depend on the supplier's specific context. Suppliers are given clear performance objectives within reasonable timeframes with the ultimate goal of progressive elimination of these risks from the supply chain.

In addition, suppliers are guided to the Assent University learning platform to engage in educational materials on mitigating the risk of smelters or refiners on the supply chain.

If any smelter or refiner is not recognized by the RMI, Assent conducts outreach and research to gain more information about whether they are a smelter or a refiner, sourcing practices, location, and country of origin. Additionally, if any smelter is not certified conflict-free, Assent conducts outreach providing education on the RMAP and encouraging them to join this program.

Additionally, suppliers are evaluated on program strength (further assisting in identifying risk in the supply chain). Many companies continue to be in the middle of the process and still have “unknown” as some of the answers. It has been decided that penalizing or failing them for working through the process is likely not the best approach for the initial years of compliance, it does not meet the goals or spirit of the Rule, however evaluating and tracking the strength of the program does meet the OECD Due Diligence Guidelines and can assist in making key risk mitigation decisions as the program progresses. The criteria used to evaluate the strength of the program are:

- A. Have you established a conflict minerals sourcing policy?
- E. Have you implemented due diligence measures for conflict-free sourcing?
- G. Do you review due diligence information received from your suppliers against your company’s expectations?
- H. Does your review process include corrective action management?

When suppliers meet or exceed those criteria (“Yes” to at least A, E, G, H), they are deemed to have a strong program. When suppliers do not meet those criteria, they are deemed to have a weak program.

We believe that the inquiries and investigations described above represent a reasonable effort to determine the mines or locations of origin of the Conflict Minerals in our Covered Products, including (1) seeking information about Conflict Minerals smelters and refiners in our supply chain through requesting that our suppliers complete the CMRT, (2) verifying those smelters and refiners with the expanding RMI lists, (3) conducting the due diligence review, and (4) obtaining additional documentation and verification, as applicable.

4.4 Design and Implement a Strategy to Respond to Risks

In response to this risk assessment, Harvard Bioscience has an approved risk management plan, through which the conflict minerals program is implemented, managed, and monitored.

As part of our risk management plan, to ensure suppliers understand our expectations we have provided both video recorded training, and documented instructions through Assent. As the program progresses, contacts via email and phone by Harvard Bioscience procurement team members will be completed as an escalation to ensure the importance of a response via CMRTs to Assent and the required cooperation for compliance to the Conflict Minerals rules will be emphasized.

As described in our conflict minerals policy, we engage any of our suppliers whom we have reason to believe are supplying us with Conflict Minerals from sources that may support conflict in the Covered Countries to establish an alternative source of Conflict Minerals that does not support such conflict, as provided in the OECD guidance. We have found no instances where it was necessary to terminate a contract or find a replacement supplier.

4.5 Carry out Independent Third-Party Audit of Supply Chain Due Diligence at Identified Points in the Supply Chain

We do not typically have a direct relationship with smelters and refiners and therefore do not perform or direct audits of these entities. However, we will rely on publicly available third-party assurances and certifications, for example, through the RMI’s Responsible Minerals Assurance Process “RMAP”.

4.6 Report annually on supply chain due diligence

We report annually on our supply chain due diligence by filing a Form SD and a Conflict Minerals Report with the SEC. Our Form SD and Conflict Minerals Report can be found on the Corporate Governance page of our website: <http://investor.harvardbioscience.com/corporate-governance.cfm>.

5. Due Diligence Results

Survey Responses

We are actively surveying our supplier chain. This year we surveyed 1,217 suppliers. Of those suppliers we received CMRTs from 537 suppliers. We review the responses against criteria developed to determine whether further engagement with our suppliers is required. These criteria included untimely or incomplete responses as well as inconsistencies within the data reported in the template. We, through the assistance of Assent, have worked with these suppliers to provide revised responses. All final CMRT submissions were reviewed and validated to ensure no inaccuracies or gaps in data were found. At the end of our campaigning, 4 suppliers were unable to correct their CMRT and as such, are still listed as invalid submissions.

Smelters or Refiners

The information that we received from a majority of our Applicable Suppliers was at their company-wide level. Thus, the smelters or refiners identified by our Applicable Suppliers contained in the tables below may contain smelters or refiners that processed conflict minerals that our Applicable Suppliers supplied to their other customers, but not to us. As a result, we are unable to conclusively determine whether the smelters or refiners included in the tables below were used to process the conflict minerals necessary to the functionality or production of our products during 2019. Because of this uncertainty, we are also unable to conclusively determine whether each of the countries of origin listed above were the country of origin of conflict minerals in our products during 2019, and therefore also unable to conclusively determine the source and chain of custody of those conflict minerals. In addition, the information that we receive from our Applicable Suppliers may yield inaccurate or incomplete information because they may not have received accurate and complete conflict minerals information from all of the suppliers in their own supply chain. As we are not a member of the RMI, we also do not have access to audit reports or detailed findings of the third-party audits conducted as part of the RMI's RMAP or the LBMA Responsible Gold Program and, as a result, are not responsible for the quality of these audits or the audit findings.

Our third-party service provider compared the facilities listed in the responses in the CMRT to the list of smelters maintained by the RMI, and confirmed that the name was listed by RMI as a legitimate smelter. As of May 11, 2020, we have validated in this manner that 305 smelters or refiners provided in our supplier CMRTs are included on these lists. The facilities determined to be legitimate smelters or refiners based on this comparison to the RMI-maintained list have also been compared to the RMI's RMAP list. Based on this comparison, we are aware of 235 compliant smelters or refiners, 7 smelters or refiners that have begun the process and are deemed as active in the RMAP but have not yet been validated as Conflict-Free and 56 smelters or refiners that are not enrolled in the process to become compliant to the RMAP. Confirmed smelter or refiner sourcing is not generally available through public information sources related to the smelter or refiner however Attachment A does include an aggregate country list of known smelter or refiner sourcing countries. Despite the additional smelter information obtained from these suppliers, in most cases information has been provided on a company or division level, rather than on a component level. Therefore, we cannot yet ascertain whether the smelters identified by our suppliers are related to any parts or components actually provided to us by the suppliers. Attachment A lists the smelters and refiners that the suppliers we surveyed reported as being in their supply chains. We have not included in Attachment A any smelters or refiners that we have not been able to validate. Attachment A also includes the facility RMI audit status.

Efforts to determine mine or location of origin

As noted above, the current efforts focus on gathering smelter information via the CMRT reporting template and, as the program progresses, requiring full completion of all necessary smelter identification information which will enable the validation and disclosure of the smelters as well as the tracing of the Conflict Minerals to their location of origin. Seeking information about Conflict Minerals smelters and refiners in our supply chain represents the most reasonable effort we can make to determine the mines or locations of origin of the Conflict Minerals in our supply chain.

6. Steps to improve future due diligence and to mitigate risk

We intend to take the following steps to improve the due diligence conducted to further mitigate any risk that the necessary Conflict Minerals in our products could benefit armed groups in the DRC or adjoining countries:

- Continue to engage with suppliers and direct them to training resources to attempt to increase the response rate and improve the content of the supplier survey responses.
 - Suppliers will continue to be requested to inform Harvard Bioscience of the correlation between these smelters and the products and parts they supply to Harvard Bioscience
 - Continue to engage any of our suppliers found to be supplying us with Conflict Minerals from sources that support conflict in the DRC or any adjoining country to establish an alternative source of Conflict Minerals that does not support such conflict.
 - Continue to evaluate upstream sources through a broader set of tools to evaluate risk that includes using a comprehensive smelter and refiner library with detailed status and notes for each listing, scanning for credible media on each smelter and refiner to flag risk issues, and comparing the list of smelters and refiners against government watch and denied parties lists.
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APPENDIX A

Smelter Table

Metal	Standard Smelter Name	Smelter Facility Location	Smelter ID
Gold	8853 S.p.A.	ITALY	CID002763
Gold	Abington Reldan Metals, LLC	UNITED STATES OF AMERICA	CID002708
Gold	Advanced Chemical Company	UNITED STATES OF AMERICA	CID000015
Gold	African Gold Refinery	UGANDA	CID003185
Gold	Aida Chemical Industries Co., Ltd.	JAPAN	CID000019
Gold	Al Etihad Gold Refinery DMCC	UNITED ARAB EMIRATES	CID002560
Gold	Allgemeine Gold-und Silberscheideanstalt A.G.	GERMANY	CID000035
Gold	Almalyk Mining and Metallurgical Complex (AMMC)	UZBEKISTAN	CID000041
Gold	AngloGold Ashanti Corrego do Sitio Mineracao	BRAZIL	CID000058
Gold	Argor-Heraeus S.A.	SWITZERLAND	CID000077
Gold	Asahi Pretec Corp.	JAPAN	CID000082
Gold	Asahi Refining Canada Ltd.	CANADA	CID000924
Gold	Asahi Refining USA Inc.	UNITED STATES OF AMERICA	CID000920
Gold	Asaka Riken Co., Ltd.	JAPAN	CID000090
Gold	Atasay Kuyumculuk Sanayi Ve Ticaret A.S.	TURKEY	CID000103
Gold	AU Traders and Refiners	SOUTH AFRICA	CID002850
Gold	Aurubis AG	GERMANY	CID000113
Gold	Bangalore Refinery	INDIA	CID002863
Gold	Bangko Sentral ng Pilipinas (Central Bank of the Philippines)	PHILIPPINES	CID000128
Gold	Boliden AB	SWEDEN	CID000157
Gold	C. Hafner GmbH + Co. KG	GERMANY	CID000176
Gold	C.I Metales Procesados Industriales SAS	COLOMBIA	CID003421
Gold	Caridad	MEXICO	CID000180
Gold	CCR Refinery - Glencore Canada Corporation	CANADA	CID000185
Gold	Cendres + Metaux S.A.	SWITZERLAND	CID000189
Gold	CGR Metalloys Pvt Ltd.	INDIA	CID003382
Gold	Chimet S.p.A.	ITALY	CID000233
Gold	Chugai Mining	JAPAN	CID000264
Gold	Daye Non-Ferrous Metals Mining Ltd.	CHINA	CID000343
Gold	Degussa Sonne / Mond Goldhandel GmbH	GERMANY	CID002867
Gold	Dijllah Gold Refinery FZC	UNITED ARAB EMIRATES	CID003348
Gold	DODUCO Contacts and Refining GmbH	GERMANY	CID000362
Gold	Dowa	JAPAN	CID000401
Gold	DS PRETECH Co., Ltd.	KOREA, REPUBLIC OF	CID003195
Gold	DSC (Do Sung Corporation)	KOREA, REPUBLIC OF	CID000359
Gold	Eco-System Recycling Co., Ltd. East Plant	JAPAN	CID000425
Gold	Eco-System Recycling Co., Ltd. North Plant	JAPAN	CID003424
Gold	Eco-System Recycling Co., Ltd. West Plant	JAPAN	CID003425
Gold	Emirates Gold DMCC	UNITED ARAB EMIRATES	CID002561
Gold	Fidelity Printers and Refiners Ltd.	ZIMBABWE	CID002515

Gold	Fujairah Gold FZC	UNITED ARAB EMIRATES	CID002584
Gold	GCC Gujrat Gold Centre Pvt. Ltd.	INDIA	CID002852
Gold	Geib Refining Corporation	UNITED STATES OF AMERICA	CID002459
Gold	Gold Coast Refinery	GHANA	CID003186
Gold	Gold Refinery of Zijin Mining Group Co., Ltd.	CHINA	CID002243
Gold	Great Wall Precious Metals Co., Ltd. of CBPM	CHINA	CID001909
Gold	Guangdong Jinding Gold Limited	CHINA	CID002312
Gold	Guoda Safina High-Tech Environmental Refinery Co., Ltd.	CHINA	CID000651
Gold	Hangzhou Fuchunjiang Smelting Co., Ltd.	CHINA	CID000671
Gold	Heimerle + Meule GmbH	GERMANY	CID000694
Gold	Heraeus Metals Hong Kong Ltd.	CHINA	CID000707
Gold	Heraeus Precious Metals GmbH & Co. KG	GERMANY	CID000711
Gold	Hunan Chenzhou Mining Co., Ltd.	CHINA	CID000767
Gold	Hunan Guiyang yinxing Nonferrous Smelting Co., Ltd.	CHINA	CID000773
Gold	HwaSeong CJ CO., LTD.	KOREA, REPUBLIC OF	CID000778
Gold	Inner Mongolia Qiankun Gold and Silver Refinery Share Co., Ltd.	CHINA	CID000801
Gold	International Precious Metal Refiners	UNITED ARAB EMIRATES	CID002562
Gold	Ishifuku Metal Industry Co., Ltd.	JAPAN	CID000807
Gold	Istanbul Gold Refinery	TURKEY	CID000814
Gold	Italpreziosi	ITALY	CID002765
Gold	JALAN & Company	INDIA	CID002893
Gold	Japan Mint	JAPAN	CID000823
Gold	Jiangxi Copper Co., Ltd.	CHINA	CID000855
Gold	JSC Ekaterinburg Non-Ferrous Metal Processing Plant	RUSSIAN FEDERATION	CID000927
Gold	JSC Uralelectromed	RUSSIAN FEDERATION	CID000929
Gold	JX Nippon Mining & Metals Co., Ltd.	JAPAN	CID000937
Gold	Kaloti Precious Metals	UNITED ARAB EMIRATES	CID002563
Gold	Kazakhmys Smelting LLC	KAZAKHSTAN	CID000956
Gold	Kazzinc	KAZAKHSTAN	CID000957
Gold	Kennecott Utah Copper LLC	UNITED STATES OF AMERICA	CID000969
Gold	KGHM Polska Miedz Spolka Akcyjna	POLAND	CID002511
Gold	Kojima Chemicals Co., Ltd.	JAPAN	CID000981
Gold	Korea Zinc Co., Ltd.	KOREA, REPUBLIC OF	CID002605
Gold	Kyrgyzaltyn JSC	KYRGYZSTAN	CID001029
Gold	Kyshtym Copper-Electrolytic Plant ZAO	RUSSIAN FEDERATION	CID002865
Gold	L'azurde Company For Jewelry	SAUDI ARABIA	CID001032
Gold	Lingbao Gold Co., Ltd.	CHINA	CID001056
Gold	Lingbao Jinyuan Tonghui Refinery Co., Ltd.	CHINA	CID001058
Gold	L'Orfebre S.A.	ANDORRA	CID002762
Gold	LS-NIKKO Copper Inc.	KOREA, REPUBLIC OF	CID001078
Gold	LT Metal Ltd.	KOREA, REPUBLIC OF	CID000689
Gold	Luoyang Zijin Yinhui Gold Refinery Co., Ltd.	CHINA	CID001093
Gold	Marsam Metals	BRAZIL	CID002606
Gold	Materion	UNITED STATES OF AMERICA	CID001113

Gold	Matsuda Sangyo Co., Ltd.	JAPAN	CID001119
Gold	Metalor Technologies (Hong Kong) Ltd.	CHINA	CID001149
Gold	Metalor Technologies (Singapore) Pte., Ltd.	SINGAPORE	CID001152
Gold	Metalor Technologies (Suzhou) Ltd.	CHINA	CID001147
Gold	Metalor Technologies S.A.	SWITZERLAND	CID001153
Gold	Metalor USA Refining Corporation	UNITED STATES OF AMERICA	CID001157
Gold	Metalurgica Met-Mex Penoles S.A. De C.V.	MEXICO	CID001161
Gold	Mitsubishi Materials Corporation	JAPAN	CID001188
Gold	Mitsui Mining and Smelting Co., Ltd.	JAPAN	CID001193
Gold	MMTC-PAMP India Pvt., Ltd.	INDIA	CID002509
Gold	Modeltech Sdn Bhd	MALAYSIA	CID002857
Gold	Morris and Watson	NEW ZEALAND	CID002282
Gold	Moscow Special Alloys Processing Plant	RUSSIAN FEDERATION	CID001204
Gold	Nadir Metal Rafineri San. Ve Tic. A.S.	TURKEY	CID001220
Gold	Navoi Mining and Metallurgical Combinat	UZBEKISTAN	CID001236
Gold	NH Recytech Company	KOREA, REPUBLIC OF	CID003189
Gold	Nihon Material Co., Ltd.	JAPAN	CID001259
Gold	Ogussa Osterreichische Gold- und Silber-Scheideanstalt GmbH	AUSTRIA	CID002779
Gold	Ohura Precious Metal Industry Co., Ltd.	JAPAN	CID001325
Gold	OJSC "The Gulidov Krasnoyarsk Non-Ferrous Metals Plant" (OJSC Krastsvetmet)	RUSSIAN FEDERATION	CID001326
Gold	OJSC Novosibirsk Refinery	RUSSIAN FEDERATION	CID000493
Gold	PAMP S.A.	SWITZERLAND	CID001352
Gold	Pease & Curren	UNITED STATES OF AMERICA	CID002872
Gold	Penglai Penggang Gold Industry Co., Ltd.	CHINA	CID001362
Gold	Planta Recuperadora de Metales SpA	CHILE	CID002919
Gold	Prioksky Plant of Non-Ferrous Metals	RUSSIAN FEDERATION	CID001386
Gold	PT Aneka Tambang (Persero) Tbk	INDONESIA	CID001397
Gold	PX Precinox S.A.	SWITZERLAND	CID001498
Gold	QG Refining, LLC	UNITED STATES OF AMERICA	CID003324
Gold	Rand Refinery (Pty) Ltd.	SOUTH AFRICA	CID001512
Gold	Refinery of Seemine Gold Co., Ltd.	CHINA	CID000522
Gold	REMONDIS PMR B.V.	NETHERLANDS	CID002582
Gold	Royal Canadian Mint	CANADA	CID001534
Gold	SAAMP	FRANCE	CID002761
Gold	Sabin Metal Corp.	UNITED STATES OF AMERICA	CID001546
Gold	Safimet S.p.A	ITALY	CID002973
Gold	SAFINA A.S.	CZECH REPUBLIC	CID002290
Gold	Sai Refinery	INDIA	CID002853
Gold	Samduck Precious Metals	KOREA, REPUBLIC OF	CID001555
Gold	Samwon Metals Corp.	KOREA, REPUBLIC OF	CID001562
Gold	SAXONIA Edelmetalle GmbH	GERMANY	CID002777
Gold	SEMPSA Joyeria Plateria S.A.	SPAIN	CID001585
Gold	Shandong Humon Smelting Co., Ltd.	CHINA	CID002525
Gold	Shandong Tiancheng Biological Gold Industrial Co., Ltd.	CHINA	CID001619
Gold	Shandong Zhaojin Gold & Silver Refinery Co., Ltd.	CHINA	CID001622
Gold	Sichuan Tianze Precious Metals Co., Ltd.	CHINA	CID001736

Gold	Singway Technology Co., Ltd.	TAIWAN, PROVINCE OF CHINA	CID002516
Gold	SOE Shyolkovsky Factory of Secondary Precious Metals	RUSSIAN FEDERATION	CID001756
Gold	Solar Applied Materials Technology Corp.	TAIWAN, PROVINCE OF CHINA	CID001761
Gold	Sovereign Metals	INDIA	CID003383
Gold	State Research Institute Center for Physical Sciences and Technology	LITHUANIA	CID003153
Gold	Sudan Gold Refinery	SUDAN	CID002567
Gold	Sumitomo Metal Mining Co., Ltd.	JAPAN	CID001798
Gold	SungEel HiMetal Co., Ltd.	KOREA, REPUBLIC OF	CID002918
Gold	T.C.A S.p.A	ITALY	CID002580
Gold	Tanaka Kikinzoku Kogyo K.K.	JAPAN	CID001875
Gold	The Refinery of Shandong Gold Mining Co., Ltd.	CHINA	CID001916
Gold	Tokuriki Honten Co., Ltd.	JAPAN	CID001938
Gold	Tongling Nonferrous Metals Group Co., Ltd.	CHINA	CID001947
Gold	Tony Goetz NV	BELGIUM	CID002587
Gold	TOO Tau-Ken-Altyn	KAZAKHSTAN	CID002615
Gold	Torecom	KOREA, REPUBLIC OF	CID001955
Gold	Umicore Brasil Ltda.	BRAZIL	CID001977
Gold	Umicore Precious Metals Thailand	THAILAND	CID002314
Gold	Umicore S.A. Business Unit Precious Metals Refining	BELGIUM	CID001980
Gold	United Precious Metal Refining, Inc.	UNITED STATES OF AMERICA	CID001993
Gold	Valcambi S.A.	SWITZERLAND	CID002003
Gold	Western Australian Mint (T/a The Perth Mint)	AUSTRALIA	CID002030
Gold	WIELAND Edelmetalle GmbH	GERMANY	CID002778
Gold	Yamakin Co., Ltd.	JAPAN	CID002100
Gold	Yokohama Metal Co., Ltd.	JAPAN	CID002129
Gold	Yunnan Copper Industry Co., Ltd.	CHINA	CID000197
Gold	Zhongyuan Gold Smelter of Zhongjin Gold Corporation	CHINA	CID002224
Tantalum	Asaka Riken Co., Ltd.	JAPAN	CID000092
Tantalum	Changsha South Tantalum Niobium Co., Ltd.	CHINA	CID000211
Tantalum	CP Metals Inc.	UNITED STATES OF AMERICA	CID003402
Tantalum	D Block Metals, LLC	UNITED STATES OF AMERICA	CID002504
Tantalum	Exotech Inc.	UNITED STATES OF AMERICA	CID000456
Tantalum	F&X Electro-Materials Ltd.	CHINA	CID000460
Tantalum	FIR Metals & Resource Ltd.	CHINA	CID002505
Tantalum	Global Advanced Metals Aizu	JAPAN	CID002558
Tantalum	Global Advanced Metals Boyertown	UNITED STATES OF AMERICA	CID002557
Tantalum	Guangdong Zhiyuan New Material Co., Ltd.	CHINA	CID000616
Tantalum	H.C. Starck Co., Ltd.	THAILAND	CID002544
Tantalum	H.C. Starck Hermsdorf GmbH	GERMANY	CID002547
Tantalum	H.C. Starck Inc.	UNITED STATES OF AMERICA	CID002548
Tantalum	H.C. Starck Ltd.	JAPAN	CID002549
Tantalum	H.C. Starck Smelting GmbH & Co. KG	GERMANY	CID002550
Tantalum	H.C. Starck Tantalum and Niobium GmbH	GERMANY	CID002545

Tantalum	Hengyang King Xing Lifeng New Materials Co., Ltd.	CHINA	CID002492
Tantalum	Jiangxi Dinghai Tantalum & Niobium Co., Ltd.	CHINA	CID002512
Tantalum	Jiangxi Tuohong New Raw Material	CHINA	CID002842
Tantalum	JiuJiang JinXin Nonferrous Metals Co., Ltd.	CHINA	CID000914
Tantalum	Jiujiang Tanbre Co., Ltd.	CHINA	CID000917
Tantalum	Jiujiang Zhongao Tantalum & Niobium Co., Ltd.	CHINA	CID002506
Tantalum	KEMET Blue Metals	MEXICO	CID002539
Tantalum	LSM Brasil S.A.	BRAZIL	CID001076
Tantalum	Metallurgical Products India Pvt., Ltd.	INDIA	CID001163
Tantalum	Mineracao Taboca S.A.	BRAZIL	CID001175
Tantalum	Mitsui Mining and Smelting Co., Ltd.	JAPAN	CID001192
Tantalum	Ningxia Orient Tantalum Industry Co., Ltd.	CHINA	CID001277
Tantalum	NPM Silmet AS	ESTONIA	CID001200
Tantalum	PRG Dooel	NORTH MACEDONIA, REPUBLIC OF	CID002847
Tantalum	QuantumClean	UNITED STATES OF AMERICA	CID001508
Tantalum	Resind Industria e Comercio Ltda.	BRAZIL	CID002707
Tantalum	Solikamsk Magnesium Works OAO	RUSSIAN FEDERATION	CID001769
Tantalum	Taki Chemical Co., Ltd.	JAPAN	CID001869
Tantalum	Telex Metals	UNITED STATES OF AMERICA	CID001891
Tantalum	Ulba Metallurgical Plant JSC	KAZAKHSTAN	CID001969
Tantalum	XinXing HaoRong Electronic Material Co., Ltd.	CHINA	CID002508
Tantalum	Yanling Jincheng Tantalum & Niobium Co., Ltd.	CHINA	CID001522
Tin	Alpha	UNITED STATES OF AMERICA	CID000292
Tin	An Vinh Joint Stock Mineral Processing Company	VIET NAM	CID002703
Tin	Chenzhou Yunxiang Mining and Metallurgy Co., Ltd.	CHINA	CID000228
Tin	Chifeng Dajingzi Tin Industry Co., Ltd.	CHINA	CID003190
Tin	China Tin Group Co., Ltd.	CHINA	CID001070
Tin	Dongguan CiEXPO Environmental Engineering Co., Ltd.	CHINA	CID003356
Tin	Dowa	JAPAN	CID000402
Tin	Electro-Mechanical Facility of the Cao Bang Minerals & Metallurgy Joint Stock Company	VIET NAM	CID002572
Tin	EM Vinto	BOLIVIA (PLURINATIONAL STATE OF)	CID000438
Tin	Estanho de Rondonia S.A.	BRAZIL	CID000448
Tin	Fenix Metals	POLAND	CID000468
Tin	Gejiu City Fuxiang Industry and Trade Co., Ltd.	CHINA	CID003410
Tin	Gejiu Kai Meng Industry and Trade LLC	CHINA	CID000942
Tin	Gejiu Non-Ferrous Metal Processing Co., Ltd.	CHINA	CID000538
Tin	Gejiu Yunxin Nonferrous Electrolysis Co., Ltd.	CHINA	CID001908
Tin	Gejiu Zili Mining And Metallurgy Co., Ltd.	CHINA	CID000555

Tin	Guangdong Hanhe Non-Ferrous Metal Co., Ltd.	CHINA	CID003116
Tin	Guanyang Guida Nonferrous Metal Smelting Plant	CHINA	CID002849
Tin	HuiChang Hill Tin Industry Co., Ltd.	CHINA	CID002844
Tin	Huichang Jinshunda Tin Co., Ltd.	CHINA	CID000760
Tin	Jiangxi New Nanshan Technology Ltd.	CHINA	CID001231
Tin	Luna Smelter, Ltd.	RWANDA	CID003387
Tin	Ma'anshan Weitai Tin Co., Ltd.	CHINA	CID003379
Tin	Magnu's Minerai's Metais e Ligas Ltda.	BRAZIL	CID002468
Tin	Malaysia Smelting Corporation (MSC)	MALAYSIA	CID001105
Tin	Melt Metais e Ligas S.A.	BRAZIL	CID002500
Tin	Metallic Resources, Inc.	UNITED STATES OF AMERICA	CID001142
Tin	Metallo Belgium N.V.	BELGIUM	CID002773
Tin	Metallo Spain S.L.U.	SPAIN	CID002774
Tin	Mineracao Taboca S.A.	BRAZIL	CID001173
Tin	Minsur	PERU	CID001182
Tin	Mitsubishi Materials Corporation	JAPAN	CID001191
Tin	Modeltech Sdn Bhd	MALAYSIA	CID002858
Tin	Nghe Tinh Non-Ferrous Metals Joint Stock Company	VIET NAM	CID002573
Tin	O.M. Manufacturing (Thailand) Co., Ltd.	THAILAND	CID001314
Tin	O.M. Manufacturing Philippines, Inc.	PHILIPPINES	CID002517
Tin	Operaciones Metalurgicas S.A.	BOLIVIA (PLURINATIONAL STATE OF)	CID001337
Tin	Pongpipat Company Limited	MYANMAR	CID003208
Tin	Precious Minerals and Smelting Limited	INDIA	CID003409
Tin	PT Artha Cipta Langgeng	INDONESIA	CID001399
Tin	PT ATD Makmur Mandiri Jaya	INDONESIA	CID002503
Tin	PT Menara Cipta Mulia	INDONESIA	CID002835
Tin	PT Mitra Stania Prima	INDONESIA	CID001453
Tin	PT Refined Bangka Tin	INDONESIA	CID001460
Tin	PT Timah Tbk Kundur	INDONESIA	CID001477
Tin	PT Timah Tbk Mentok	INDONESIA	CID001482
Tin	Resind Industria e Comercio Ltda.	BRAZIL	CID002706
Tin	Rui Da Hung	TAIWAN, PROVINCE OF CHINA	CID001539
Tin	Soft Metais Ltda.	BRAZIL	CID001758
Tin	Super Ligas	BRAZIL	CID002756
Tin	Thai Nguyen Mining and Metallurgy Co., Ltd.	VIET NAM	CID002834
Tin	Thaisarco	THAILAND	CID001898
Tin	Tin Technology & Refining	UNITED STATES OF AMERICA	CID003325
Tin	Tuyen Quang Non-Ferrous Metals Joint Stock Company	VIET NAM	CID002574
Tin	White Solder Metalurgia e Mineracao Ltda.	BRAZIL	CID002036
Tin	Yunnan Chengfeng Non-ferrous Metals Co., Ltd.	CHINA	CID002158
Tin	Yunnan Tin Company Limited	CHINA	CID002180
Tin	Yunnan Yunfan Non-ferrous Metals Co., Ltd.	CHINA	CID003397
Tungsten	A.L.M.T. Corp.	JAPAN	CID000004

Tungsten	ACL Metais Eireli	BRAZIL	CID002833
Tungsten	Albasteel Industria e Comercio de Ligas Para Fundicao Ltd.	BRAZIL	CID003427
Tungsten	Asia Tungsten Products Vietnam Ltd.	VIET NAM	CID002502
Tungsten	Chenzhou Diamond Tungsten Products Co., Ltd.	CHINA	CID002513
Tungsten	China Molybdenum Co., Ltd.	CHINA	CID002641
Tungsten	Chongyi Zhangyuan Tungsten Co., Ltd.	CHINA	CID000258
Tungsten	CNMC (Guangxi) PGMA Co., Ltd.	CHINA	CID000281
Tungsten	CP Metals Inc.	UNITED STATES OF AMERICA	CID003448
Tungsten	Fujian Ganmin RareMetal Co., Ltd.	CHINA	CID003401
Tungsten	Fujian Jinxin Tungsten Co., Ltd.	CHINA	CID000499
Tungsten	Ganzhou Haichuang Tungsten Co., Ltd.	CHINA	CID002645
Tungsten	Ganzhou Huaxing Tungsten Products Co., Ltd.	CHINA	CID000875
Tungsten	Ganzhou Jiangwu Ferrotungsten Co., Ltd.	CHINA	CID002315
Tungsten	Ganzhou Seadragon W & Mo Co., Ltd.	CHINA	CID002494
Tungsten	GEM Co., Ltd.	CHINA	CID003417
Tungsten	Global Tungsten & Powders Corp.	UNITED STATES OF AMERICA	CID000568
Tungsten	Guangdong Xianglu Tungsten Co., Ltd.	CHINA	CID000218
Tungsten	H.C. Starck Smelting GmbH & Co. KG	GERMANY	CID002542
Tungsten	H.C. Starck Tungsten GmbH	GERMANY	CID002541
Tungsten	Hunan Chenzhou Mining Co., Ltd.	CHINA	CID000766
Tungsten	Hunan Chuangda Vanadium Tungsten Co., Ltd. Wuji	CHINA	CID002579
Tungsten	Hunan Chunchang Nonferrous Metals Co., Ltd.	CHINA	CID000769
Tungsten	Hunan Litian Tungsten Industry Co., Ltd.	CHINA	CID003182
Tungsten	Hydrometallurg, JSC	RUSSIAN FEDERATION	CID002649
Tungsten	Japan New Metals Co., Ltd.	JAPAN	CID000825
Tungsten	Jiangwu H.C. Starck Tungsten Products Co., Ltd.	CHINA	CID002551
Tungsten	Jiangxi Gan Bei Tungsten Co., Ltd.	CHINA	CID002321
Tungsten	Jiangxi Minmetals Gao'an Non-ferrous Metals Co., Ltd.	CHINA	CID002313
Tungsten	Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co., Ltd.	CHINA	CID002318
Tungsten	Jiangxi Xianglu Tungsten Co., Ltd.	CHINA	CID002647
Tungsten	Jiangxi Xinsheng Tungsten Industry Co., Ltd.	CHINA	CID002317
Tungsten	Jiangxi Yaosheng Tungsten Co., Ltd.	CHINA	CID002316
Tungsten	JSC "Kirovgrad Hard Alloys Plant"	RUSSIAN FEDERATION	CID003408
Tungsten	Kennametal Fallon	UNITED STATES OF AMERICA	CID000966
Tungsten	Kennametal Huntsville	UNITED STATES OF AMERICA	CID000105
Tungsten	KGETS Co., Ltd.	KOREA, REPUBLIC OF	CID003388
Tungsten	Lianyou Metals Co., Ltd.	TAIWAN, PROVINCE OF CHINA	CID003407
Tungsten	Malipo Haiyu Tungsten Co., Ltd.	CHINA	CID002319
Tungsten	Masan Tungsten Chemical LLC (MTC)	VIET NAM	CID002543
Tungsten	Moliren Ltd.	RUSSIAN FEDERATION	CID002845
Tungsten	Niagara Refining LLC	UNITED STATES OF AMERICA	CID002589
Tungsten	NPP Tyazhmetprom LLC	RUSSIAN FEDERATION	CID003416
Tungsten	Philippine Chuangxin Industrial Co., Inc.	PHILIPPINES	CID002827

Tungsten	Tejing (Vietnam) Tungsten Co., Ltd.	VIET NAM	CID001889
Tungsten	Unecha Refractory metals plant	RUSSIAN FEDERATION	CID002724
Tungsten	Wolfram Bergbau und Hutten AG	AUSTRIA	CID002044
Tungsten	Woltech Korea Co., Ltd.	KOREA, REPUBLIC OF	CID002843
Tungsten	Xiamen Tungsten (H.C.) Co., Ltd.	CHINA	CID002320
Tungsten	Xiamen Tungsten Co., Ltd.	CHINA	CID002082
Tungsten	Xinfeng Huarui Tungsten & Molybdenum New Material Co., Ltd.	CHINA	CID002830
Tungsten	Xinhai Rendan Shaoguan Tungsten Co., Ltd.	CHINA	CID002095

Country of Origin List:

This list below sets out possible countries of origin of 3TGs used in the manufacture of products containing conflict minerals that are necessary to the functionality or production of our products. The list is based on publicly available information, our reasonable country of origin investigation, and other due diligence. For the reasons described in the Report, however, these possible countries of origin cannot necessarily be linked to our products:

Afghanistan Albania Angola Argentina Armenia Australia Austria Belarus Belgium Bermuda Bolivia Brazil Bulgaria Burundi Cambodia Canada Central African Republic Chile China Colombia Czech Republic Djibouti Dominican Republic DRC or an adjoining country (Covered Countries) Ecuador Egypt England Estonia Ethiopia Finland France Germany Ghana Guinea Guyana Hungary India Indonesia Ireland Israel Italy Ivory Coast Japan Kazakhstan Kenya Kyrgyzstan Laos Liberia Lithuania Luxembourg Madagascar Malaysia Mali Mauritania Mexico Mongolia Morocco Mozambique Myanmar Namibia Netherlands New Zealand Niger Nigeria Papua New Guinea Peru Philippines Poland Portugal Republic Of Korea Russia Rwanda Saudi Arabia Sierra Leone Singapore Slovakia Slovenia South Africa Spain Sudan Suri Suriname Sweden Switzerland Tanzania Thailand Turkey Uganda United Arab Emirates United Kingdom USA Uzbekistan Viet Nam Zambia Zimbabwe