

**Harvard Bioscience, Inc.****Conflict Minerals Report****For The Year Ended December 31, 2015**

This report for the year ended December 31, 2015 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") or 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, except for subsidiaries not subject to the requirements of this report until calendar year ended December 31, 2016.

Harvard Bioscience is a global developer, manufacturer and marketer of a broad range of scientific instruments, systems and lab consumables used to advance life science for basic research, drug discovery, clinical and environmental testing. Our products are sold to thousands of researchers in over 100 countries through our global sales organization, websites, catalogs, and through distributors including Thermo Fisher Scientific Inc., VWR, GE Healthcare, and other specialized distributors. We have sales and manufacturing operations in the United States, the United Kingdom, Germany, Sweden, Spain, France, Canada, and China.

***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**

Our product range is organized into three product families: Cell and Animal Physiology, Lab Products and Services, and Molecular Separation and Analysis. We primarily sell these products under brand names that include Harvard Apparatus, Denville, Biochrom, Warner Instruments, BTX, KD Scientific, Hugo Sachs Elektronik, Panlab, Coulbourn Instruments, Multi Channel Systems, Triangle Biosystems, 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 1 year since last purchase)

This ensures that all suppliers surveyed provided items to Harvard Bioscience that were used in final products in the year 2015. 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 Conflict Minerals Reporting Template (the “CMRT”), version 4.01, developed by the Electronic Industry Citizenship Coalition® 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. (This includes equipment used to make the product but is not a part of the actual product itself (i.e. Industrial equipment, computers etc..))
- 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 Supply Chain team in one on one communications. This included two to three follow ups from the supply chain 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. All submitted forms are accepted and classified as valid or invalid so that data is still retained. Suppliers are contacted in regards to invalid forms and are encouraged to resubmit a valid form.

#### **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 Organisation 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.

##### ***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 and is led by the Director of Global Quality who acts as the executive conflict minerals program manager. Senior management is briefed about the results of our due diligence efforts on a regular basis.

## 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.

## 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 hotline that is 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.

### *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.

Invalid responses are dealt with directly Assent Compliance Supply Chain staff who contact the supplier, encourage the submission of a valid CMRT, gather pertinent data and perform an assessment of the supplier's Conflict Minerals status.

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 CFSI to verify the existence of the facility and to determine whether the facility is certified as conflict-free.

We, via Assent, classify each listed smelter or refiner as high, medium or low risk based on three scoring criteria: recognition by the CFSI, geographic proximity to the Covered Countries, and certification by the CFSI as conflict-free. If any smelter or refiner is not recognized by the CFSI, 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 Conflict-Free Smelter Program 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. Do you have a policy in place that includes DRC conflict-free sourcing?
- E. Have you implemented due diligence measures for conflict-free sourcing?
- H. Do you verify due diligence information received from your suppliers?
- I. Does your verification process include corrective action management?

When suppliers meet or exceed those criteria (“Yes” to at least A,E,H,I) , 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 CFSI 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. “Fails” are a risk that is dealt with by implementing supplier corrective action measures which ensures Harvard Bioscience suppliers have policies and procedures in place that will produce the necessary data in an accurate manner. All this data is then verified through an assessment of supporting data, including smelter info. Updates to this risk assessment are provided regularly to senior management.

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 support independent third-party audits through our participation in the Conflict Free Smelter Initiative (“CFSI”). We do not typically have a direct relationship with Conflict Minerals smelters and refiners, and we do not perform or direct audits of these entities within our supply chain.

#### ***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. 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.

#### **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 2015. 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 2015, and therefore also unable to conclusively determine the source and chain of custody of those conflict minerals. In addition, the third-party audits conducted by the CFSI, the LBMA and the information that we receive from our Applicable Suppliers may yield inaccurate or incomplete information. For example, the information received from our Applicable Suppliers may be incomplete because they may not have received accurate and complete conflict minerals information from all of the suppliers in their own supply chain. We also do not have access to audit reports or detailed findings of the third-party audits conducted as part of the CFSI Conflict-Free Smelter Program or the LBMA Responsible Gold Programme 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 Conflict-Free Sourcing Initiative (“CFSI”), and confirmed that the name was listed by CFSI. As of May 9th, 2016, we have validated in this manner that 320 smelters or refiners provided in our supplier CMRTs are included on these lists.

If a supplier indicated that a facility was certified as “Conflict-Free” our third-party service provider confirmed that it was listed as such by CFSI. Based on the smelter and refiner lists provided by suppliers via the CMRTs and validated against the CFSI legitimate smelters and refiners information as described above, we are aware of 216 “Conflict-Free” smelters or refiners, 47 smelters or refiners that have begun the process to be validated as Conflict-Free, they are deemed as active in the Conflict Free Smelter Program but have not yet been validated as Conflict-Free and 57 smelters or refiners that are not Conflict-Free and have not started the process to become Conflict-Free. 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 location and whether a smelter or refiner is Conflict-Free.



**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:

- Include a conflict minerals flow-down clause in new or renewed supplier contracts.
- Expand the number of suppliers requested to supply information.
- 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 also be requested to inform Harvard Bioscience of the correlation between these smelters and the products and parts they supply to Harvard Bioscience
- 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.

## ATTACHMENT A

<b>Metal</b>	<b>Smelter or Refiner Name</b>	<b>Smelter or Refiner Facility Location</b>	<b>Conflict Free?</b>
Gold	Advanced Chemical Company	UNITED STATES	
Gold	Aida Chemical Industries Co., Ltd.	JAPAN	Yes
Gold	Aktyubinsk Copper Company TOO	KAZAKHSTAN	
Gold	Al Etihad Gold Refinery DMCC	UNITED ARAB EMIRATES	
Gold	Allgemeine Gold-und Silberscheideanstalt A.G.	GERMANY	Yes
Gold	Almalyk Mining and Metallurgical Complex (AMMC)	UZBEKISTAN	
Gold	AngloGold Ashanti Córrego do Sítio Mineração	BRAZIL	Yes
Gold	Argor-Heraeus SA	SWITZERLAND	Yes
Gold	Asahi Pretec Corporation	JAPAN	Yes
Gold	Asahi Refining Canada Limited	CANADA	Yes
Gold	Asahi Refining USA Inc.	UNITED STATES	Yes
Gold	Asaka Riken Co., Ltd.	JAPAN	Yes
Gold	Atasay Kuyumculuk Sanayi Ve Ticaret A.S.	TURKEY	
Gold	Aurubis AG	GERMANY	Yes
Gold	Bangko Sentral ng Pilipinas (Central Bank of the Philippines)	PHILIPPINES	Yes
Gold	Bauer Walser AG	GERMANY	
Gold	Boliden AB	SWEDEN	Yes
Gold	C. Hafner GmbH + Co. KG	GERMANY	Yes
Gold	Caridad	MEXICO	
Gold	CCR Refinery - Glencore Canada Corporation	CANADA	Yes
Gold	Cendres + Métaux SA	SWITZERLAND	
Gold	Chimet S.p.A.	ITALY	Yes
Gold	Chugai Mining	JAPAN	
Gold	Daejin Indus Co., Ltd.	KOREA, REPUBLIC OF	
Gold	Daye Non-Ferrous Metals Mining Ltd.	CHINA	
Gold	Do Sung Corporation	KOREA, REPUBLIC OF	
Gold	DODUCO GmbH	GERMANY	Yes
Gold	Dowa	JAPAN	Yes
Gold	Eco-System Recycling Co., Ltd.	JAPAN	Yes
Gold	Elemental Refining, LLC	UNITED STATES	Yes
Gold	Emirates Gold DMCC	UNITED ARAB EMIRATES	Yes
Gold	Faggi Enrico S.p.A.	ITALY	
Gold	Fidelity Printers and Refiners Ltd.	ZIMBABWE	
Gold	Gansu Seemine Material Hi-Tech Co., Ltd.	CHINA	
Gold	Geib Refining Corporation	UNITED STATES	
Gold	Great Wall Precious Metals Co., Ltd. of CBPM	CHINA	
Gold	Guangdong Jinding Gold Limited	CHINA	
Gold	Guoda Safina High-Tech Environmental Refinery Co., Ltd.	CHINA	
Gold	Hangzhou Fuchunjiang Smelting Co., Ltd.	CHINA	
Gold	Heimerle + Meule GmbH	GERMANY	Yes
Gold	Heraeus Ltd. Hong Kong	CHINA	Yes
Gold	Heraeus Precious Metals GmbH & Co. KG	GERMANY	Yes
Gold	Hunan Chenzhou Mining Co., Ltd.	CHINA	
Gold	Hwasung CJ Co., Ltd.	KOREA, REPUBLIC OF	
Gold	Inner Mongolia Qiankun Gold and Silver Refinery Share Company Limited	CHINA	Yes

Gold	Ishifuku Metal Industry Co., Ltd.	JAPAN	Yes
Gold	Istanbul Gold Refinery	TURKEY	Yes
Gold	Japan Mint	JAPAN	Yes
Gold	Jiangxi Copper Company Limited	CHINA	Yes
Gold	JSC Ekaterinburg Non-Ferrous Metal Processing Plant	RUSSIAN FEDERATION	Yes
Gold	JSC Uralelectromed	RUSSIAN FEDERATION	Yes
Gold	JX Nippon Mining & Metals Co., Ltd.	JAPAN	Yes
Gold	Kaloti Precious Metals	UNITED ARAB EMIRATES	
Gold	Kazakhmys Smelting LLC	KAZAKHSTAN	
Gold	Kazzinc	KAZAKHSTAN	Yes
Gold	Kennecott Utah Copper LLC	UNITED STATES	Yes
Gold	KGHM Polska Miedz Spółka Akcyjna	POLAND	
Gold	Kojima Chemicals Co., Ltd.	JAPAN	Yes
Gold	Korea Metal Co., Ltd.	KOREA, REPUBLIC OF	
Gold	Korea Zinc Co. Ltd.	KOREA, REPUBLIC OF	
Gold	Kyrgyzaltyn JSC	KYRGYZSTAN	
Gold	L' azurde Company For Jewelry	SAUDI ARABIA	
Gold	Lingbao Gold Company Limited	CHINA	
Gold	Lingbao Jinyuan Tonghui Refinery Co., Ltd.	CHINA	
Gold	LS-NIKKO Copper Inc.	KOREA, REPUBLIC OF	Yes
Gold	Luoyang Zijin Yinhuai Gold Refinery Co., Ltd.	CHINA	
Gold	Materion	UNITED STATES	Yes
Gold	Matsuda Sangyo Co., Ltd.	JAPAN	Yes
Gold	Metahub Industries Sdn. Bhd.	MALAYSIA	
Gold	Metalor Technologies (Hong Kong) Ltd.	CHINA	Yes
Gold	Metalor Technologies (Singapore) Pte., Ltd.	SINGAPORE	Yes
Gold	Metalor Technologies (Suzhou) Ltd.	CHINA	
Gold	Metalor Technologies SA	SWITZERLAND	Yes
Gold	Metalor USA Refining Corporation	UNITED STATES	Yes
Gold	METALÚRGICA MET-MEX PEÑOLES, S.A. DE C.V	MEXICO	Yes
Gold	Mitsubishi Materials Corporation	JAPAN	Yes
Gold	Mitsui Mining and Smelting Co., Ltd.	JAPAN	Yes
Gold	MMTC-PAMP India Pvt., Ltd.	INDIA	Yes
Gold	Morris and Watson	NEW ZEALAND	
Gold	Moscow Special Alloys Processing Plant	RUSSIAN FEDERATION	Yes
Gold	Nadir Metal Rafineri San. Ve Tic. A.Ş.	TURKEY	Yes
Gold	Navoi Mining and Metallurgical Combinat	UZBEKISTAN	
Gold	Nihon Material Co., Ltd.	JAPAN	Yes
Gold	Ögussa Österreichische Gold- und Silber-Scheideanstalt GmbH	AUSTRIA	Yes
Gold	Ohura Precious Metal Industry Co., Ltd.	JAPAN	Yes
Gold	OJSC "The Gulidov Krasnoyarsk Non-Ferrous Metals Plant" (OJSC Krastsvetmet)	RUSSIAN FEDERATION	Yes
Gold	OJSC Kolyma Refinery	RUSSIAN FEDERATION	
Gold	OJSC Novosibirsk Refinery	RUSSIAN FEDERATION	Yes
Gold	PAMP SA	SWITZERLAND	Yes
Gold	Penglai Penggang Gold Industry Co., Ltd.	CHINA	
Gold	Prioksky Plant of Non-Ferrous Metals	RUSSIAN FEDERATION	Yes
Gold	PT Aneka Tambang (Persero) Tbk	INDONESIA	Yes
Gold	PX Précinox SA	SWITZERLAND	Yes
Gold	Rand Refinery (Pty) Ltd.	SOUTH AFRICA	Yes

Gold	Republic Metals Corporation	UNITED STATES	Yes
Gold	Royal Canadian Mint	CANADA	Yes
Gold	SAAMP	FRANCE	
Gold	Sabin Metal Corp.	UNITED STATES	
Gold	Samduck Precious Metals	KOREA, REPUBLIC OF	
Gold	SAMWON Metals Corp.	KOREA, REPUBLIC OF	
Gold	SAXONIA Edelmetalle GmbH	GERMANY	
Gold	Schone Edelmetaal B.V.	NETHERLANDS	Yes
Gold	SEMPSA Joyeria Plateria SA	SPAIN	Yes
Gold	Shandong Tiancheng Biological Gold Industrial Co., Ltd.	CHINA	
Gold	Shandong Zhaojin Gold & Silver Refinery Co., Ltd.	CHINA	Yes
Gold	Sichuan Tianze Precious Metals Co., Ltd.	CHINA	Yes
Gold	Singway Technology Co., Ltd.	TAIWAN	Yes
Gold	So Accurate Group, Inc.	UNITED STATES	
Gold	SOE Shyolkovsky Factory of Secondary Precious Metals	RUSSIAN FEDERATION	Yes
Gold	Solar Applied Materials Technology Corp.	TAIWAN	Yes
Gold	Sudan Gold Refinery	SUDAN	
Gold	Sumitomo Metal Mining Co., Ltd.	JAPAN	Yes
Gold	T.C.A S.p.A	ITALY	Yes
Gold	Tanaka Kikinzoku Kogyo K.K.	JAPAN	Yes
Gold	The Refinery of Shandong Gold Mining Co., Ltd.	CHINA	Yes
Gold	Tokuriki Honten Co., Ltd.	JAPAN	Yes
Gold	Tongling Nonferrous Metals Group Co., Ltd.	CHINA	
Gold	Tony Goetz NV	BELGIUM	
Gold	Torecom	KOREA, REPUBLIC OF	
Gold	Umicore Brasil Ltda.	BRAZIL	Yes
Gold	Umicore Precious Metals Thailand	THAILAND	Yes
Gold	Umicore SA Business Unit Precious Metals Refining	BELGIUM	Yes
Gold	United Precious Metal Refining, Inc.	UNITED STATES	Yes
Gold	Valcambi SA	SWITZERLAND	Yes
Gold	Western Australian Mint trading as The Perth Mint	AUSTRALIA	Yes
Gold	WIELAND Edelmetalle GmbH	GERMANY	
Gold	Yamamoto Precious Metal Co., Ltd.	JAPAN	Yes
Gold	Yokohama Metal Co., Ltd.	JAPAN	Yes
Gold	Yunnan Copper Industry Co., Ltd.	CHINA	
Gold	Zhongyuan Gold Smelter of Zhongjin Gold Corporation	CHINA	Yes
Gold	Zijin Mining Group Co., Ltd. Gold Refinery	CHINA	Yes
Tantalum	Avon Specialty Metals Ltd	UNITED KINGDOM	
Tantalum	Changsha South Tantalum Niobium Co., Ltd.	CHINA	Yes
Tantalum	Conghua Tantalum and Niobium Smeltry	CHINA	Yes
Tantalum	D Block Metals, LLC	UNITED STATES	Yes
Tantalum	Duoluoshan	CHINA	Yes
Tantalum	E.S.R. Electronics	UNITED STATES	
Tantalum	Exotech Inc.	UNITED STATES	Yes
Tantalum	F&X Electro-Materials Ltd.	CHINA	Yes
Tantalum	FIR Metals & Resource Ltd.	CHINA	Yes
Tantalum	Global Advanced Metals Aizu	JAPAN	Yes
Tantalum	Global Advanced Metals Boyertown	UNITED STATES	Yes
Tantalum	Guangdong Zhiyuan New Material Co., Ltd.	CHINA	Yes
Tantalum	Guizhou Zhenhua Xinyun Technology Ltd., Kaili branch	CHINA	

Tantalum	H.C. Starck Co., Ltd.	THAILAND	Yes
Tantalum	H.C. Starck GmbH Goslar	GERMANY	Yes
Tantalum	H.C. Starck GmbH Laufenburg	GERMANY	Yes
Tantalum	H.C. Starck Hermsdorf GmbH	GERMANY	Yes
Tantalum	H.C. Starck Inc.	UNITED STATES	Yes
Tantalum	H.C. Starck Ltd.	JAPAN	Yes
Tantalum	H.C. Starck Smelting GmbH & Co.KG	GERMANY	Yes
Tantalum	Hengyang King Xing Lifeng New Materials Co., Ltd.	CHINA	Yes
Tantalum	Hi-Temp Specialty Metals, Inc.	UNITED STATES	Yes
Tantalum	Jiangxi Dinghai Tantalum & Niobium Co., Ltd.	CHINA	Yes
Tantalum	Jiangxi Tuohong New Raw Material	CHINA	Yes
Tantalum	JiuJiang JinXin Nonferrous Metals Co., Ltd.	CHINA	Yes
Tantalum	Jiujiang Tanbre Co., Ltd.	CHINA	Yes
Tantalum	Jiujiang Zhongao Tantalum & Niobium Co., Ltd.	CHINA	Yes
Tantalum	KEMET Blue Metals	MEXICO	Yes
Tantalum	KEMET Blue Powder	UNITED STATES	Yes
Tantalum	King-Tan Tantalum Industry Ltd.	CHINA	Yes
Tantalum	LSM Brasil S.A.	BRAZIL	Yes
Tantalum	Metallurgical Products India Pvt., Ltd.	INDIA	Yes
Tantalum	Mineração Taboca S.A.	BRAZIL	Yes
Tantalum	Mitsui Mining & Smelting	JAPAN	Yes
Tantalum	Molycorp Silmet A.S.	ESTONIA	Yes
Tantalum	Ningxia Orient Tantalum Industry Co., Ltd.	CHINA	Yes
Tantalum	Plansee SE Liezen	AUSTRIA	Yes
Tantalum	Plansee SE Reutte	AUSTRIA	Yes
Tantalum	QuantumClean	UNITED STATES	Yes
Tantalum	Resind Indústria e Comércio Ltda.	BRAZIL	Yes
Tantalum	RFH Tantalum Smeltry Co., Ltd.	CHINA	Yes
Tantalum	Solikamsk Magnesium Works OAO	RUSSIAN FEDERATION	Yes
Tantalum	Taki Chemicals	JAPAN	Yes
Tantalum	Telex Metals	UNITED STATES	Yes
Tantalum	Tranzact, Inc.	UNITED STATES	Yes
Tantalum	Ulba Metallurgical Plant JSC	KAZAKHSTAN	Yes
Tantalum	XinXing HaoRong Electronic Material Co., Ltd.	CHINA	Yes
Tantalum	Yichun Jin Yang Rare Metal Co., Ltd.	CHINA	Yes
Tantalum	Zhuzhou Cemented Carbide	CHINA	Yes
Tin	Alpha	UNITED STATES	Yes
Tin	An Thai Minerals Company Limited	VIET NAM	
Tin	An Vinh Joint Stock Mineral Processing Company	VIET NAM	
Tin	Chenzhou Yun Xiang mining limited liability company	CHINA	
Tin	China Tin Group Co., Ltd.	CHINA	Yes
Tin	CNMC (Guangxi) PGMA Co., Ltd.	CHINA	
Tin	Cooperativa Metalurgica de Rondônia Ltda.	BRAZIL	Yes
Tin	CV Ayi Jaya	INDONESIA	Yes
Tin	CV Dua Sekawan	INDONESIA	
Tin	CV Gita Pesona	INDONESIA	Yes
Tin	CV Serumpun Sebalai	INDONESIA	Yes
Tin	CV Tiga Sekawan	INDONESIA	
Tin	CV United Smelting	INDONESIA	Yes
Tin	CV Venus Inti Perkasa	INDONESIA	Yes

Tin	Dowa	JAPAN	Yes
Tin	Electro-Mechanical Facility of the Cao Bang Minerals & Metallurgy Joint Stock Company	VIET NAM	
Tin	Elmet S.L.U. (Metallo Group)	SPAIN	Yes
Tin	EM Vinto	BOLIVIA	Yes
Tin	Estanho de Rondônia S.A.	BRAZIL	
Tin	Feinhütte Halsbrücke GmbH	GERMANY	
Tin	Fenix Metals	POLAND	Yes
Tin	Gejiu Fengming Metallurgy Chemical Plant	CHINA	
Tin	Gejiu Kai Meng Industry and Trade LLC	CHINA	
Tin	Gejiu Non-Ferrous Metal Processing Co., Ltd.	CHINA	Yes
Tin	Gejiu Yunxin Nonferrous Electrolysis Co., Ltd.	CHINA	
Tin	Gejiu Zili Mining And Metallurgy Co., Ltd.	CHINA	
Tin	Guanyang Guida Nonferrous Metal Smelting Plant	CHINA	
Tin	HuiChang Hill Tin Industry Co., Ltd.	CHINA	
Tin	Huichang Jinshunda Tin Co., Ltd.	CHINA	
Tin	Jiangxi Ketai Advanced Material Co., Ltd.	CHINA	Yes
Tin	Linwu Xianggui Ore Smelting Co., Ltd.	CHINA	
Tin	Magnu's Minerai's Metais e Ligas Ltda.	BRAZIL	Yes
Tin	Malaysia Smelting Corporation (MSC)	MALAYSIA	Yes
Tin	Melt Metais e Ligas S/A	BRAZIL	Yes
Tin	Metahub Industries Sdn. Bhd.	MALAYSIA	
Tin	Metallic Resources, Inc.	UNITED STATES	Yes
Tin	Metallo-Chimique N.V.	BELGIUM	Yes
Tin	Mineração Taboca S.A.	BRAZIL	Yes
Tin	Minsur	PERU	Yes
Tin	Mitsubishi Materials Corporation	JAPAN	Yes
Tin	Nankang Nanshan Tin Manufactory Co., Ltd.	CHINA	
Tin	Nghe Tinh Non-Ferrous Metals Joint Stock Company	VIET NAM	
Tin	O.M. Manufacturing (Thailand) Co., Ltd.	THAILAND	Yes
Tin	O.M. Manufacturing Philippines, Inc.	PHILIPPINES	Yes
Tin	Operaciones Metalurgical S.A.	BOLIVIA	Yes
Tin	Phoenix Metal Ltd.	RWANDA	
Tin	PT Alam Lestari Kencana	INDONESIA	
Tin	PT Aries Kencana Sejahtera	INDONESIA	Yes
Tin	PT Artha Cipta Langgeng	INDONESIA	Yes
Tin	PT ATD Makmur Mandiri Jaya	INDONESIA	Yes
Tin	PT Babel Inti Perkasa	INDONESIA	Yes
Tin	PT Bangka Kudai Tin	INDONESIA	
Tin	PT Bangka Prima Tin	INDONESIA	Yes
Tin	PT Bangka Timah Utama Sejahtera	INDONESIA	
Tin	PT Bangka Tin Industry	INDONESIA	Yes
Tin	PT Belitung Industri Sejahtera	INDONESIA	Yes
Tin	PT BilliTin Makmur Lestari	INDONESIA	Yes
Tin	PT Bukit Timah	INDONESIA	Yes
Tin	PT Cipta Persada Mulia	INDONESIA	Yes
Tin	PT DS Jaya Abadi	INDONESIA	Yes
Tin	PT Eunindo Usaha Mandiri	INDONESIA	Yes
Tin	PT Fang Di MulTindo	INDONESIA	
Tin	PT Inti Stania Prima	INDONESIA	Yes

Tin	PT Justindo	INDONESIA	Yes
Tin	PT Karimun Mining	INDONESIA	
Tin	PT Kijang Jaya Mandiri	INDONESIA	
Tin	PT Mitra Stania Prima	INDONESIA	Yes
Tin	PT Panca Mega Persada	INDONESIA	Yes
Tin	PT Pelat Timah Nusantara Tbk	INDONESIA	
Tin	PT Prima Timah Utama	INDONESIA	Yes
Tin	PT Refined Bangka Tin	INDONESIA	Yes
Tin	PT Sariwiguna Binasentosa	INDONESIA	Yes
Tin	PT Seirama Tin Investment	INDONESIA	
Tin	PT Stanindo Inti Perkasa	INDONESIA	Yes
Tin	PT Sukses Inti Makmur	INDONESIA	Yes
Tin	PT Sumber Jaya Indah	INDONESIA	Yes
Tin	PT Timah (Persero) Tbk Kunder	INDONESIA	Yes
Tin	PT Timah (Persero) Tbk Mentok	INDONESIA	Yes
Tin	PT Tinindo Inter Nusa	INDONESIA	Yes
Tin	PT Tirus Putra Mandiri	INDONESIA	
Tin	PT Tommy Utama	INDONESIA	Yes
Tin	PT Wahana Perkit Jaya	INDONESIA	Yes
Tin	Resind Indústria e Comércio Ltda.	BRAZIL	Yes
Tin	Rui Da Hung	TAIWAN	Yes
Tin	Soft Metais Ltda.	BRAZIL	Yes
Tin	Thaisarco	THAILAND	Yes
Tin	Tuyen Quang Non-Ferrous Metals Joint Stock Company	VIET NAM	
Tin	VQB Mineral and Trading Group JSC	VIET NAM	Yes
Tin	White Solder Metalurgia e Mineração Ltda.	BRAZIL	Yes
Tin	Yunnan Chengfeng Non-ferrous Metals Co., Ltd.	CHINA	
Tin	Yunnan Tin Group (Holding) Company Limited	CHINA	Yes
Tungsten	A.L.M.T. TUNGSTEN Corp.	JAPAN	Yes
Tungsten	ACL Metais Eireli	BRAZIL	
Tungsten	Asia Tungsten Products Vietnam Ltd.	VIET NAM	Yes
Tungsten	Chenzhou Diamond Tungsten Products Co., Ltd.	CHINA	Yes
Tungsten	Chongyi Zhangyuan Tungsten Co., Ltd.	CHINA	Yes
Tungsten	Dayu Jincheng Tungsten Industry Co., Ltd.	CHINA	
Tungsten	Dayu Weiliang Tungsten Co., Ltd.	CHINA	
Tungsten	Fujian Jinxin Tungsten Co., Ltd.	CHINA	Yes
Tungsten	Ganxian Shirui New Material Co., Ltd.	CHINA	
Tungsten	Ganzhou Huaxing Tungsten Products Co., Ltd.	CHINA	Yes
Tungsten	Ganzhou Jiangwu Ferrotungsten Co., Ltd.	CHINA	Yes
Tungsten	Ganzhou Non-ferrous Metals Smelting Co., Ltd.	CHINA	
Tungsten	Ganzhou Seadragon W & Mo Co., Ltd.	CHINA	Yes
Tungsten	Ganzhou Yatai Tungsten Co., Ltd.	CHINA	Yes
Tungsten	Global Tungsten & Powders Corp.	UNITED STATES	Yes
Tungsten	Guangdong Xianglu Tungsten Co., Ltd.	CHINA	Yes
Tungsten	H.C. Starck GmbH	GERMANY	Yes
Tungsten	H.C. Starck Smelting GmbH & Co.KG	GERMANY	Yes
Tungsten	Hunan Chenzhou Mining Co., Ltd.	CHINA	Yes
Tungsten	Hunan Chuangda Vanadium Tungsten Co., Ltd. Wuji	CHINA	
Tungsten	Hunan Chuangda Vanadium Tungsten Co., Ltd. Yanglin	CHINA	
Tungsten	Hunan Chunchang Nonferrous Metals Co., Ltd.	CHINA	Yes

Tungsten	Hydrometallurg, JSC	RUSSIAN FEDERATION	Yes
Tungsten	Japan New Metals Co., Ltd.	JAPAN	Yes
Tungsten	Jiangwu H.C. Starck Tungsten Products Co., Ltd.	CHINA	
Tungsten	Jiangxi Dayu Longxintai Tungsten Co., Ltd.	CHINA	
Tungsten	Jiangxi Gan Bei Tungsten Co., Ltd.	CHINA	Yes
Tungsten	Jiangxi Minmetals Gao'an Non-ferrous Metals Co., Ltd.	CHINA	
Tungsten	Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co., Ltd.	CHINA	
Tungsten	Jiangxi Xinsheng Tungsten Industry Co., Ltd.	CHINA	
Tungsten	Jiangxi Xiushui Xianggan Nonferrous Metals Co., Ltd.	CHINA	Yes
Tungsten	Jiangxi Yaosheng Tungsten Co., Ltd.	CHINA	
Tungsten	Kennametal Fallon	UNITED STATES	
Tungsten	Kennametal Huntsville	UNITED STATES	Yes
Tungsten	Malipo Haiyu Tungsten Co., Ltd.	CHINA	Yes
Tungsten	Moliren Ltd	RUSSIAN FEDERATION	
Tungsten	Niagara Refining LLC	UNITED STATES	Yes
Tungsten	Nui Phao H.C. Starck Tungsten Chemicals Manufacturing LLC	VIET NAM	Yes
Tungsten	Philippine Chuangin Industrial Co., Inc.	PHILIPPINES	Yes
Tungsten	Pobedit, JSC	RUSSIAN FEDERATION	
Tungsten	Sanher Tungsten Vietnam Co., Ltd.	VIET NAM	
Tungsten	Tejing (Vietnam) Tungsten Co., Ltd.	VIET NAM	Yes
Tungsten	Vietnam Youngsun Tungsten Industry Co., Ltd.	VIET NAM	Yes
Tungsten	Wolfram Bergbau und Hütten AG	AUSTRIA	Yes
Tungsten	Woltech Korea Co., Ltd.	KOREA, REPUBLIC OF	
Tungsten	Xiamen Tungsten (H.C.) Co., Ltd.	CHINA	Yes
Tungsten	Xiamen Tungsten Co., Ltd.	CHINA	Yes
Tungsten	Xinfeng Huarui Tungsten & Molybdenum New Material Co., Ltd.	CHINA	
Tungsten	Xinhai Rendan Shaoguan Tungsten Co., Ltd.	CHINA	Yes

## Country of Origin List:

Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Cambodia, Canada, Chile, China, Columbia, Cote D'Ivoire, Czech Republic, Djibouti, Ecuador, Egypt, Estonia, Ethiopia, France, Germany, Guyana, Hungary, India, Indonesia, Ireland, Israel, Japan, Kazakhstan, Laos, Luxembourg, Madagascar, Malaysia, Mongolia, Myanmar, Namibia, Netherlands, Nigeria, Peru, Portugal, Russia, Sierra Leone, Singapore, Slovakia, South Korea, Spain, Suriname, Switzerland, Taiwan, Thailand, United Kingdom, United States, Vietnam, Zimbabwe, Kenya, Mozambique, South Africa, Democratic Republic of the Congo, Angola, Burundi, Central African Republic, Republic of Congo, Rwanda, South Sudan, Tanzania, Uganda, and Zambia.