# **UNITED STATES**

# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# FORM SD SPECIALIZED DISCLOSURE REPORT

Commission file number: 001-16429

#### ABB Ltd

(Exact name of registrant as specified in its charter) Switzerland (Jurisdiction of incorporation or organization) Affolternstrasse 44 CH-8050 Zurich Switzerland (Address of principal executive offices) Richard A. Brown Affolternstrasse 44 CH-8050 Zurich Switzerland Telephone: +41-43-317-7111 Facsimile: +41-43-317-7992 (Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

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, 2016.

#### Introduction

ABB Ltd is a corporation organized under the laws of Switzerland. In this Form SD and the attached Conflict Minerals Report (included as Exhibit 1.01), "ABB", the "Company", "we", and "our" refer to ABB Ltd and its consolidated subsidiaries. ABB is a foreign private issuer as defined under Rule 405 of Regulation C under the Securities Act of 1933 and Rule 3b-4 under the Securities Exchange Act of 1934. Our shares are currently listed on the SIX Swiss Exchange, the NASDAQ OMX Stockholm Exchange and the New York Stock Exchange (in the form of American Depositary Shares). We are a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids, serving customers in utilities, industry and transport & infrastructure globally. For more than four decades, we have been part of the industrial digitalization. With more than 70 million devices connected through our installed base of more than 70,000 control systems across all customer segments we serve, we are well-positioned to benefit from the Energy and Fourth Industrial Revolution. With a heritage of more than 130 years, we operate in more than 100 countries with about 132,000 employees.

Conflict minerals are defined as cassiterite, columbite-tantalite and wolframite, and their derivatives, which are limited to tin, tantalum and tungsten, as well as gold (3TG). The functionality of a substantial portion of our global product portfolio relies on the use of direct materials, especially electronic components, which include amounts of tin, tantalum, tungsten or gold (*necessary conflict minerals*). For example, tin, tantalum, tungsten and gold are each contained respectively in weld wire, capacitors, electronic contacts and electrical connection coatings, each of which are components in many of our products. Our operating divisions and their products are described in more detail below.

In 2016 we operated in a structure with four operating divisions. Effective January 1, 2017, as part of the ABB Next Level Strategy, the structure of these four operating divisions has been further focused. The changes in the divisional structure did not affect the range of our consolidated product portfolio or our overall conflict minerals due diligence program. The description of our current operating divisions and their main products is as follows:

- Electrification Products: manufactures and sells products and services including electric vehicle charging, solar inverters, modular substation packages, switchgear, UPS solutions, circuit breakers, control products, wiring accessories, enclosures and cabling systems, and intelligent home and building solutions designed to integrate and automate the lighting, heating and ventilation, and security and data communication networks.
- **Robotics and Motion:** manufactures and sells robotics, motors, generators, drives, wind converters, components and systems for railways and related services and digital solutions for a wide range of applications in industry, transportation and infrastructure, and utilities.
- **Industrial Automation:** develops and sells integrated automation and electrification systems and solutions, a comprehensive range of services ranging from repair to advanced services such as remote monitoring and preventive maintenance and cybersecurity services, process and discrete control solutions, advanced process control software and manufacturing execution systems, sensing, measurement and analytics, electric ship propulsion systems and large turbochargers.
- **Power Grids:** offers a range of products, systems, service and software solutions across the power value chain of generation, transmission and distribution, to utility, industry, transportation and infrastructure customers. These offerings address existing and evolving grid needs such as the integration of renewables, network control, digital substations, microgrids and asset management. The division portfolio includes turnkey grid integration, transmission systems and substation solutions as well as a wide range of power, distribution and traction transformers, and an array of high-voltage products, such as circuit breakers, switchgear and capacitors.

As ABB files reports with the U.S. Securities and Exchange Commission under Section 13(a) of the Securities Exchange Act of 1934, and is a user of *necessary conflict minerals* to produce its manufactured products, ABB is subject to Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (17 CFR Parts 240 and 249b). ABB's Policy on Conflict Minerals can be found at new.abb.com/about/supplying/conflict-minerals-policy

The content of any Web site referred to in this Form SD is included for general information only and is not incorporated by reference in this Form SD.

#### Section 1 - Conflict Minerals Disclosures

- a. We have concluded that during the 2016 calendar year:
  - i. based on an analysis of our global product offering, we have manufactured products containing conflict minerals and have determined that the use of these minerals is necessary to the functionality or production of these products.
  - ii. based on the Reasonable Country of Origin Inquiry (RCOI) conducted (see below), we have reason to believe that a portion of the Company's *necessary conflict minerals* originated or may have originated in the Democratic Republic of the Congo (DRC) or an adjoining country<sup>1</sup> (collectively the "covered countries") and may not be from recycled or scrap sources.

### b. Description of RCOI

We are a large organization and have manufacturing facilities located around the world. We manufacture products in more than 500 product lines and have approximately 70,000 unique direct material suppliers. In 2015, we had significantly expanded the assessment of our product portfolio to identify the use of 3TG in our products. This process was performed to identify the use of 3TG in our products and utilized ABB product experts, including representatives from supply chain management, engineering, and research and development, in making these component assessments. During 2016, we completed the remaining detailed assessments for our product portfolio such that a detailed component and supplier listing is available for our products. In our global product portfolio, only a small portion of our products have been determined not to contain any 3TG.

To assess whether the *necessary conflict minerals* in our products originated from the covered countries, we performed a RCOI by identifying direct suppliers of products likely to contain 3TG and surveying a sample of these suppliers using the Conflict Minerals Reporting Template (CMRT) as developed and issued by the Conflict-Free Sourcing Initiative (CFSI) of the Electronic Industry Citizenship Coalition (EICC) and the Global eSustainability Initiative (GeSI).

In 2016, we determined the scope of the RCOI procedures based on the results of the product-level component assessments described above. We continued to focus our supplier selection procedures to increase the coverage of suppliers providing us with components likely to contain 3TG. Our efforts focused on identifying the specific components containing 3TG across our product portfolio and selecting those suppliers for inclusion in the RCOI procedures. In 2016, we selected approximately 6,200 suppliers to be surveyed. Our efforts to refine the supplier selection process has resulted in increasing the coverage of our purchases containing 3TG included in the RCOI to a sufficient level that we believe could allow us to appropriately assess the conflict status of our products.

<sup>&</sup>lt;sup>1</sup> Adjoining countries of the Democratic Republic of the Congo are: Angola, Burundi, Republic of the Congo, Central African Republic, Rwanda, South Sudan, Tanzania, Uganda and Zambia.

Most of the selected suppliers who confirmed that they supplied us with products containing 3TG were able to provide us with the names of the original smelters/refiners used to process 3TG contained in their products. Based on the list of processing facilities we have compiled and based on smelter/refiner-specific country sourcing information we have received through our membership in the CFSI, we believe that some of the *necessary conflict minerals* in our products may have originated from the covered countries and were not from recycled or scrap sources. Although most suppliers who responded to our survey were able to provide us with a list of the original smelters/refiners that they identified as being used to process 3TG contained in their products, most of our suppliers were unable to identify and represent which smelters/refiners were specifically used for 3TG in the products or materials supplied to ABB. Therefore, the lists of smelters/refiners provided by suppliers may contain facilities that were not used to process 3TG contained in the components they provided to us.

#### c. Disclosure of this Form and the Conflict Minerals report

In accordance with Rule 13p-1 under the Securities Exchange Act of 1934, this Specialized Disclosure Form (Form SD) and the associated Conflict Minerals Report are available on our Web site at www.abb.com/investorrelations under "Quarterly results and annual reports", "2016", "SEC Filings".

#### Section 2 - Exhibits

Exhibit 1.01 - Conflict Minerals Report as required by Items 1.01 and 1.02 of this Form.

# SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the duly authorized undersigned.

## ABB LTD

Date: May 30, 2017

By: /s/ TIMO IHAMUOTILA

Name:Timo IhamuotilaTitle:Executive Vice President and<br/>Chief Financial Officer

By: /s/ RICHARD A. BROWN

 

 Name:
 Richard A. Brown

 Title:
 Group Senior Vice President and Chief Counsel Corporate & Finance

Date: May 30, 2017

## Conflict Minerals Report ABB Ltd For the year ended December 31, 2016

This Conflict Minerals Report (CMR) of ABB Ltd for the calendar year 2016 has been prepared pursuant to Rule 13p-1 under the Securities Exchange Act of 1934 ("Rule 13p-1" or the "Rule"). The Rule was adopted by the United States 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 Rule imposes certain reporting obligations on SEC registrants whose manufactured products contain conflict minerals which are necessary to the functionality or production of such products. Conflict minerals are defined as cassiterite, columbite-tantalite and wolframite, and their derivatives, which are limited to tin, tantalum and tungsten, as well as gold (3TG). These requirements apply to SEC registrants whatever the geographic origin of the conflict minerals and whether or not they fund armed conflict.

The functionality of a substantial portion of our global product portfolio relies on the use of direct materials, especially electronic components, which include amounts of tin, tantalum, tungsten or gold (*necessary conflict minerals*). If a registrant can establish that their *necessary conflict minerals* originated from sources other than from a covered country<sup>1</sup>, or are from recycled or scrap sources, they must submit a Form SD which describes their determination and the Reasonable Country of Origin Inquiry (RCOI) performed.

If a registrant has reason to believe that any of the conflict minerals in their supply chain may have originated in the covered countries and are not from recycled or scrap sources, or if they are unable to determine the country of origin of those conflict minerals, then the registrant must exercise due diligence on the conflict minerals' source and chain of custody. The registrant must submit a CMR annually to the SEC that includes a description of those due diligence measures.

Numerous terms in this report are defined in Rule 13p-1 and Form SD and the reader is invited to refer to those sources. The report presented herein is not audited. The content of any Web site referred to in this report is included for general information only and is not incorporated by reference in this Report.

#### Section 1: Due diligence framework

In accordance with Rule 13p-1, we undertook due diligence efforts, including the RCOI described in Form SD, to determine whether the 3TG in our products originated from sources (e.g. suppliers, smelters, refiners, mines) that did not or do not directly or indirectly finance or benefit armed groups in the covered countries. We designed our due diligence measures to be in conformity, in all material respects, with the internationally recognized due diligence framework set forth in the Organisation for Economic Cooperation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD, 2013) (the OECD Framework) and related supplements for tin, tantalum, tungsten and gold.

<sup>&</sup>lt;sup>1</sup> The Democratic Republic of the Congo and its adjoining countries (Angola, Burundi, Republic of the Congo, Central African Republic, Rwanda, South Sudan, Tanzania, Uganda, or Zambia).

#### Section 2: Due diligence measures undertaken

Our due diligence measures to identify the sources of 3TG contained in our products have continued to progress since we commenced in 2013. Our due diligence efforts for 2016 focused on maintaining the company-wide measures previously introduced while expanding and enhancing our due diligence activities. Since commencing our due diligence efforts, we have taken the following five steps, consistent with the OECD Framework:

### Step 1: Establish company management systems

We undertook the following measures to establish company management systems per Step 1 of the OECD Framework:

### **Mission statement**

- We maintained a website dedicated to material compliance, including a statement on our position on conflict minerals. The "ABB Policy on Conflict Minerals" with respect to the sourcing of 3TG is published online at new.abb.com/about/supplying/conflict-minerals-policy
- We continued to promote awareness of the conflict minerals program within ABB through a number of communication channels including targeted communications to specific employee groups, adding articles and information videos on the Company's intranet and targeted internal communication letters from our supply chain senior management.

#### Internal Management Systems and Teams

- We continued to use a cross-functional conflict minerals team, including representatives from supply chain management, legal, technology and finance, as well as from each of our operating divisions, to direct the execution of our conflict minerals compliance program. The representatives from each operating division come from various backgrounds and have access to the resources within each division, including the research and development, the engineering and the production departments. ABB's Group Head of Supply Chain is responsible for the program. Program oversight is provided by a Steering Committee and the program is sponsored by two members of our Group Executive Committee, including the head of one of our operating divisions and our General Counsel & Company Secretary.
- We updated our ABB-specific web-based training courses. These are customized for various ABB employee groups (management, buyers, engineering, research and development, product sales and other). Each operating division's conflict minerals leader identified key conflict minerals personnel to undergo mandatory training on conflict minerals.

### Supplier Engagement

- We continued to maintain and communicate our "Supplier Code of Conduct" which requires our suppliers to implement a policy regarding conflict minerals, to exercise due diligence in investigating the source of these minerals, and to respond in a timely manner to ABB's requests for evidence of their compliance with these requirements.
- As part of our supplier onboarding and evaluation process, we invited all new suppliers to take an ABB-specific web-based training course on conflict minerals that covers the highlights of the relevant law and the importance of ethical sourcing to the industry, and communicates ABB's policy on conflict minerals. The training also includes guidance for our suppliers on how to complete the Conflict Minerals Reporting Template (CMRT) as developed and issued by the Conflict-Free Sourcing Initiative (CFSI) of the Electronic Industry Citizenship Coalition (EICC) and the Global eSustainability Initiative (GeSI).

- We continued to require suppliers to adhere to the "ABB General Terms and Conditions for Purchase of Goods" which requires our suppliers to provide requested information regarding the use of 3TG in their products supplied to ABB. In addition (as described on our Web site), these terms and conditions require our suppliers to:
  - work towards ensuring that they do not have 3TG sourced from conflict mines in products supplied to ABB,
  - comply with the ABB Supplier Code of Conduct, including the sections relating to conflict minerals compliance,
  - take the necessary steps to demonstrate that any 3TG contained in the products supplied to ABB do not originate from mines that support or fund conflict within the covered countries, and
  - extend their search further down their supply chain, if necessary, to determine the source of specified minerals.
- For suppliers who continued to provide us with inaccurate or incomplete responses we enhanced our supplier due diligence process by providing these suppliers with additional training in the form of webinars and other follow-up communications to assist in improving the response quality of such suppliers.

# Company Level Grievance Mechanism

• We maintained our company-wide integrity reporting channels, such as the ABB Business Ethics Hotline, which is available for the reporting of any violations of our Supplier Code of Conduct by our suppliers, including requirements related to conflict minerals. The hotline provides a grievance mechanism and is maintained by an independent third party. It can be used by ABB employees as well as parties outside ABB, such as suppliers. The hotline can be reached by dialing +41-43-317-33-67 or by using an internet-based interface at www.compliancestakeholder.com

### Step 2: Identify and assess risks in the supply chain

To identify risks in the supply chain, we performed the following:

### Identify suppliers

• In 2016, we completed the identification of components likely to contain 3TG within each of our product offerings and identified the suppliers of these components. Using ABB experts, including product engineers, material experts and research and development personnel, an assessment of the product components was made to identify components likely to contain 3TG. These identified components were then categorized into different levels of risk, depending on the likelihood of 3TG content, the volume of transactions with the supplier and the total value of the components purchased. This assessment was then linked to our supplier database in order to identify which suppliers to prioritize, with a focus on covering the highest-risk suppliers, in terms of 3TG content and amount of products purchased.

## Survey identified suppliers

• We surveyed selected suppliers using the CMRT, as part of the RCOI described in Form SD.

#### Assess supplier responses

- We utilized a dedicated team, responsible for reviewing supplier surveys and assessing "red flags"
  (as described in the OECD Framework). We implemented a structured process to send and receive
  supplier surveys, follow up on non-responses, summarize survey results, and to identify and
  respond to red flags. Our red-flag identification and review process also included assessing the
  completeness and accuracy of the list of smelters/refiners provided in the survey responses.
- We asked the selected suppliers to gather information about smelters/refiners in their supply chain and provide us with a list of these smelters/refiners. Although the suppliers who responded to our survey were able to provide us with a list of the original smelters/refiners they identified as being used to process 3TG contained in their products, most of our suppliers were unable to identify and represent which smelter/refiner was specifically used for 3TG in the products or materials supplied to ABB. The lists of smelters/refiners we have identified to be processing or refining 3TG in our products are included below under Annex 1 to this CMR.

#### Step 3: Design and implement a strategy to respond to identified risks

Our strategy to respond to identified risks commenced with our efforts to obtain complete and accurate information from our suppliers. Where suppliers did not respond to the initial survey request, additional followup inquiries were made. We also followed up on incomplete or inconsistent supplier responses, requesting additional information or clarification. In many cases, the follow up was made by product buyers, who worked with suppliers to try to resolve insufficient responses. To assess the accuracy of each of the suppliers' responses, we also compared the names of the reported smelters/refiners against a list received from the CFSI of known smelters/refiners, including their conflict status.

For completed surveys, responses were evaluated against a pre-defined list of red flags to determine what corrective action, if any, would be required for the identified risk. A corrective action plan was implemented for the identified red flags, including insufficient responses. Ultimately, the corrective action could include the discontinuation of sourcing from a supplier. Our red flag review process reflects guidance from the OECD Framework. In 2016, as part of a company-wide supplier rationalization process, the conflict minerals compliance status of the supplier was considered when determining the continuation of use for a supplier and in certain cases, supplier relationships with non-cooperative suppliers were terminated.

A management reporting dashboard was prepared regularly which summarized the content of survey responses and the status of our risk assessment process. The dashboard also provided an overview of the status of supplier responses, the types of red flags identified and any corrective action required. We reported the content of the dashboard and the progress on addressing the identified red flags to the program Steering Committee on a regular basis. The Steering Committee reviewed the progress status regularly, evaluated appropriate measures and recommended actions to mitigate risks.

#### Step 4: Carry out independent third-party audit of smelter/refiner due diligence practices

We are a downstream consumer of 3TG. Generally, we do not purchase raw minerals or ores, and are generally several steps removed from smelters/refiners within our supply chain. Therefore, we do not perform direct audits of those smelters/refiners. However, we actively participated in a regional CFSI Smelter Engagement Team which researches and validates alleged smelters and conducts coordinated outreach to known smelters to encourage them to participate in the Conflict-Free Smelter Program (CFSP). This included directly engaging and visiting a smelter which was identified as being higher-risk and which is not yet certified. We believe that this involvement contributes to the overall goal of the CFSI which is to improve regulatory compliance and support responsible sourcing from conflict-affected and high-risk areas. We also support the EICC and GeSI's Conflict-Free Sourcing Initiative which is a measure contemplated by the *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas*, the internationally recognized standard on which our Company's systems (described in Step 1 above) are based. Furthermore, we also supported the CFSP through a monetary donation to the CFSI Initial Audit fund, which covers the audit costs for smelters/refiners who successfully complete their first audit. The data on which we relied for certain statements in this CMR was obtained through our membership in the CFSI, using the Reasonable Country of Origin Inquiry report for member "ASEA".

#### Step 5: Report annually on supply chain due diligence

This report and the associated Form SD are available online at www.abb.com/investorrelations under "Quarterly results and annual reports", "2016", "SEC Filings".

# Section 3: Results of due diligence

In 2016, we received completed reporting templates from 74% of our surveyed suppliers (72% in 2015). We are in dialogue with the remaining suppliers who provided us with an incomplete or inconsistent response.

Our suppliers are generally several tiers removed from the origin of and smelters of their raw materials, and therefore have challenges in performing their due diligence. As a result, the information provided by our suppliers is often incomplete or is not verified, and we are therefore unable to verify with certainty the source and chain of custody of all the 3TG minerals in our supply chain.

In 2016, our supplier responses identified 396 smelters/refiners as being the source of 3TG in their products (379 in 2015). The complete lists of identified smelters/refiners are included in Annex I of this CMR. However, the suppliers only provided the country of origin of the 3TG in a limited number of cases. We obtained further sourcing information through our membership in the CFSI which allows us access to the names of the countries of origin for 3TG processed by certain smelters/refiners.

| Identified Smelters/Refiners |  |      |  |      |   |      |                  |      |
|------------------------------|--|------|--|------|---|------|------------------|------|
|                              | CFSP Compliant<br>Smelters/Refiners <sup>(1)</sup> |      | CFSP Participating<br>Smelters/Refiners <sup>(2)</sup> |      | Other<br>Smelters/Refiners <sup>(3)</sup> |      | Total identified |      |
|                              | 2015   | 2016 | 2015   | 2016 | 2015                                      | 2016 | 2015             | 2016 |
| Gold                         | 79   | 93   | 28   | 15   | 44  | 67   | 151              | 175  |
| Tantalum                     | 46   | 43   | 1  | -    | 5   | 4    | 52               | 47   |
| Tin                          | 59   | 67   | 21   | 8    | 42  | 49   | 122              | 124  |
| Tungsten                     | 29   | 40   | 19   | 2    | 6   | 8    | 54               | 50   |
| Total                        | 213  | 243  | 69   | 25   | 97  | 128  | 379              | 396  |

The following table provides the number of smelters/refiners identified in our supply chain.

| Identified Smelters/Refiners known to be sourcing from the covered countries |  |      |                  |      |      |      |      |      |
|--|--|------|------------------|------|------|------|------|------|
|  | CFSP Compliant<br>Smelters/Refiners^{(1)}CFSP Participating<br>Smelters/Refiners^{(2)}Other<br>Smelters/Refiners^{(3)} |      | Total identified |      |      |      |      |      |
|  | 2015   | 2016 | 2015             | 2016 | 2015 | 2016 | 2015 | 2016 |
| Tantalum   | 16   | 18   | -                | -    | -    | -    | 16   | 18   |
| Tin  | 2  | 2    | 1                | -    | -    | -    | 3    | 2    |
| Tungsten   | 4  | 4    | -                | -    | -    | -    | 4    | 4    |
| Total  | 22   | 24   | 1                | -    | -    | -    | 23   | 24   |

(1) Audited and have been found to be compliant with the CFSI's Conflict-Free Smelter Program (CFSP Compliant).

(2) In the process of being audited (CFSP Active), including for 2015, 4 tungsten smelters that have been identified as members of the Tungsten Industry – Conflict Minerals Council (TI-CMC). These smelters have agreed to complete a CFSP validation audit within two years of their TI-CMC membership issuance. This category also includes smelters and refiners who are in communication but have not commenced the validation audit.

(3) Have not commenced the CFSP validation audit.

Through our continued interaction with CFSI, we benefited from their activities, including their efforts to validate smelters as conflict-free in line with current global standards. In 2016, the percentage of our smelters/refiners which are designated as 'CFSP Compliant' increased to 61%, from 56% in 2015, primarily due to 34 smelters/refiners being newly designated as CFSP Compliant which were previously considered as either 'CFSP Participating' or 'Other'.

We have not been able to determine the conflict status for all smelters/refiners used in our supply chain. However, based on the information that we have received from our suppliers, we have not identified any smelters/refiners in our supply chain which are known to be sourcing 3TG that directly or indirectly finances or benefits armed groups in the covered countries.

As allowed by the *Statement on the Effect of the Recent Court of Appeals Decision on the Conflict Minerals Rule,* issued by the SEC on April 29, 2014, ABB has not described its products as "DRC conflict free" or "having not been found to be 'DRC conflict free".

## Section 4: Continuous improvement efforts to mitigate risk

During 2016, our conflict minerals program achieved the following improvements:

- completed the identification of the specific components which were likely to contain 3TG in our products and linked these components to the relevant supplier,
- refined the scope of the supplier surveys such that we have sufficient coverage to ultimately reach product-level conclusions,
- continued our participation in the CFSI and provided assistance to increase the number of smelters/refiners participating in the conflict-free smelter program and directly engaged one high-risk smelter,
- improved the response rate from our suppliers,
- continued to promote the awareness inside the organization through training and communication, and
- provided newly engaged suppliers with our conflict minerals training.

During 2017, we plan to take the following steps as part of our due diligence program:

- maintain and update our listing of components which are likely to contain 3TG within each of our various product offerings for ongoing product development and other changes during 2017,
- continue to work to increase the response rate and quality of supplier responses by:
  - working directly with our suppliers on the completion of their CMRT including direct engagement of our largest and key suppliers, and
  - providing additional conflict minerals training to suppliers who have been unable to provide sufficient response quality.
- increase the completeness of the listing of the smelters/refiners in our supply chain,
- continue to support the initiatives of the CFSI including our participation in a regional CFSI Smelter Engagement Team, which seeks to bring legitimate non-certified smelters into the CFSP and therefore certify them as conflict-free smelters,
- continue to include a conflict minerals clause in new or renewed supplier contracts that requires suppliers to provide us with necessary 3TG sourcing information,
- continue to follow the OECD due diligence guidance and be involved in relevant trade associations in order to define and improve best practices and encourage responsible sourcing of 3TG,
- for smelters/refiners which have been identified as being a high-risk of non-compliant sourcing practices, we plan to develop a due diligence process to follow up with our suppliers who are using these smelters/refiners. The purpose is to promote an ethical supply chain and reduce the risk that ABB has 3TG in its products which is not conflict-free, and
- continue to track uncooperative suppliers and consider terminating our relationship with these suppliers.

### Section 5: Independent audit

As ABB has not concluded on the DRC conflict status for any of its products, this CMR does not require an independent private sector audit.

#### Annex I – Lists of smelters/refiners

The lists of smelters/refiners were produced by consolidating information we have received from our suppliers. We have provided conflict minerals training to our suppliers and independently verified the status of the smelters/refiners using CFSI and other data, but we cannot guarantee that the data we have been provided with is accurate or complete. In most cases suppliers have not been able to confirm that these smelters/refiners have been used in the products they have supplied to us because they were not able to provide the CMRT at the product level. Therefore it is possible that the lists contain smelters/refiners which were not used to process 3TG contained in our products.

We generally do not have direct business relationships with any of the smelters/refiners listed below. In general, we are several tiers removed from smelters/refiners and therefore unable to exert direct influence over smelters/refiners. Due to the size of our supplier base and the complexity of global supply chains, we are also unable to clearly trace at what stage individual smelters/refiners enter the supply chain of our direct suppliers.

| Metal | Smelter Name  | Country   |
|-------|---|-----------|
| Gold  | Western Australian Mint (T/a The Perth Mint)                    | Australia |
| Gold  | Ogussa Osterreichische Gold- und Silber-Scheideanstalt GmbH     | Austria   |
| Gold  | Umicore S.A. Business Unit Precious Metals Refining             | Belgium   |
| Gold  | AngloGold Ashanti Corrego do Sitio Mineracao                    | Brazil    |
| Gold  | Umicore Brasil Ltda.  | Brazil    |
| Gold  | Asahi Refining Canada Ltd.                                      | Canada    |
| Gold  | CCR Refinery - Glencore Canada Corporation                      | Canada    |
| Gold  | Royal Canadian Mint   | Canada    |
| Gold  | Gold Refinery of Zijin Mining Group Co., Ltd.                   | China     |
| Gold  | Heraeus Metals Hong Kong Ltd.                                   | China     |
| Gold  | Inner Mongolia Qiankun Gold and Silver Refinery Share Co., Ltd. | China     |
| Gold  | Jiangxi Copper Co., Ltd.  | China     |
| Gold  | Metalor Technologies (Hong Kong) Ltd.                           | China     |
| Gold  | Metalor Technologies (Suzhou) Ltd.                              | China     |
| Gold  | Shandong Zhaojin Gold & Silver Refinery Co., Ltd.               | China     |
| Gold  | Sichuan Tianze Precious Metals Co., Ltd.                        | China     |
| Gold  | The Refinery of Shandong Gold Mining Co., Ltd.                  | China     |
| Gold  | Zhongyuan Gold Smelter of Zhongjin Gold Corporation             | China     |
| Gold  | Allgemeine Gold-und Silberscheideanstalt A.G.                   | Germany   |
| Gold  | Aurubis AG  | Germany   |
| Gold  | C. Hafner GmbH + Co. KG   | Germany   |
| Gold  | DODUCO GmbH   | Germany   |
| Gold  | Heimerle + Meule GmbH   | Germany   |
| Gold  | Heraeus Precious Metals GmbH & Co. KG                           | Germany   |
| Gold  | SAXONIA Edelmetalle GmbH  | Germany   |
| Gold  | WIELAND Edelmetalle GmbH  | Germany   |

#### **CFSP** Compliant smelters/refiners

| Metal | Smelter Name  | Country                      |
|-------|---|------------------------------|
| Gold  | MMTC-PAMP India Pvt., Ltd.                                    | India                        |
| Gold  | PT Aneka Tambang (Persero) Tbk                                | Indonesia                    |
| Gold  | Chimet S.p.A.   | Italy                        |
| Gold  | T.C.A S.p.A   | Italy                        |
| Gold  | Aida Chemical Industries Co., Ltd.                            | Japan                        |
| Gold  | Asahi Pretec Corp.  | Japan                        |
| Gold  | Asaka Riken Co., Ltd.   | Japan                        |
| Gold  | Dowa  | Japan                        |
| Gold  | Eco-System Recycling Co., Ltd.                                | Japan                        |
| Gold  | Ishifuku Metal Industry Co., Ltd.                             | Japan                        |
| Gold  | Japan Mint  | Japan                        |
| Gold  | JX Nippon Mining & Metals Co., Ltd.                           | Japan                        |
| Gold  | Kojima Chemicals Co., Ltd.                                    | Japan                        |
| Gold  | Matsuda Sangyo Co., Ltd.                                      | Japan                        |
| Gold  | Mitsubishi Materials Corporation                              | Japan                        |
| Gold  | Mitsui Mining and Smelting Co., Ltd.                          | Japan                        |
| Gold  | Nihon Material Co., Ltd.                                      | Japan                        |
| Gold  | Ohura Precious Metal Industry Co., Ltd.                       | Japan                        |
| Gold  | Sumitomo Metal Mining Co., Ltd.                               | Japan                        |
| Gold  | Tanaka Kikinzoku Kogyo K.K.                                   | Japan                        |
| Gold  | Tokuriki Honten Co., Ltd.                                     | Japan                        |
| Gold  | Yamamoto Precious Metal Co., Ltd.                             | Japan                        |
| Gold  | Yokohama Metal Co., Ltd.                                      | Japan                        |
| Gold  | Kazzinc   | Kazakhstan                   |
| Gold  | Kyrgyzaltyn JSC   | Kyrgyzstan                   |
| Gold  | Metalurgica Met-Mex Penoles S.A. De C.V.                      | Mexico                       |
| Gold  | Schone Edelmetaal B.V.  | Netherlands                  |
| Gold  | Bangko Sentral ng Pilipinas (Central Bank of the Philippines) | Philippines                  |
| Gold  | JSC Ekaterinburg Non-Ferrous Metal Processing Plant           | Russian<br>Federation        |
| Gold  | JSC Uralelectromed  | Russian                      |
| Cold  | Moscow Special Allows Processing Plant                        | Federation           Russian |
| Gold  | Noscow Special Anoys Processing Plant                         | Federation                   |
| Gold  | OJSC "The Gulidov Krasnoyarsk Non-Ferrous Metals Plant" (OJSC | Russian                      |
| Cold  | Krastsvetmet)   | Federation           Russian |
| Golu  |   | Federation                   |
| Gold  | Prioksky Plant of Non-Ferrous Metals                          | Russian<br>Federation        |
| Gold  | SOE Shyolkovsky Factory of Secondary Precious Metals          | Russian<br>Federation        |
| Gold  | Metalor Technologies (Singapore) Pte., Ltd.                   | Singapore                    |
| Gold  | AU Traders and Refiners                                       | South Africa                 |

| Metal    | Smelter Name                                    | Country                   |
|----------|---|---------------------------|
| Gold     | Rand Refinery (Pty) Ltd.                        | South Africa              |
| Gold     | Daejin Indus Co., Ltd.                          | South Korea               |
| Gold     | DSC (Do Sung Corporation)                       | South Korea               |
| Gold     | Korea Zinc Co., Ltd.                            | South Korea               |
| Gold     | LS-NIKKO Copper Inc.                            | South Korea               |
| Gold     | Samduck Precious Metals                         | South Korea               |
| Gold     | Torecom   | South Korea               |
| Gold     | SEMPSA Joyeria Plateria S.A.                    | Spain                     |
| Gold     | Boliden AB                                      | Sweden                    |
| Gold     | Argor-Heraeus S.A.                              | Switzerland               |
| Gold     | Metalor Technologies S.A.                       | Switzerland               |
| Gold     | PAMP S.A.                                       | Switzerland               |
| Gold     | PX Precinox S.A.                                | Switzerland               |
| Gold     | Valcambi S.A.                                   | Switzerland               |
| Gold     | Singway Technology Co., Ltd.                    | Taiwan                    |
| Gold     | Solar Applied Materials Technology Corp.        | Taiwan                    |
| Gold     | Umicore Precious Metals Thailand                | Thailand                  |
| Gold     | Istanbul Gold Refinery                          | Turkey                    |
| Gold     | Nadir Metal Rafineri San. Ve Tic. A.S.          | Turkey                    |
| Gold     | Al Etihad Gold LLC                              | United Arab<br>Emirates   |
| Gold     | Emirates Gold DMCC                              | United Arab               |
| Gold     | Advanced Chemical Company                       | Emirates<br>United States |
| Gold     | Asahi Refining USA Inc                          | United States             |
| Gold     | Geib Refining Corporation                       | United States             |
| Gold     | Kennecott Utah Copper LLC                       | United States             |
| Gold     | Materion  | United States             |
| Gold     | Metalor USA Refining Corporation                | United States             |
| Gold     | Republic Metals Corporation                     | United States             |
| Gold     | United Precious Metal Refining, Inc.            | United States             |
| Gold     | Almalyk Mining and Metallurgical Complex (AMMC) | Uzbekistan                |
| Tantalum | LSM Brasil S.A.                                 | Brazil                    |
| Tantalum | Mineracao Taboca S.A.                           | Brazil                    |
| Tantalum | Resind Industria e Comercio Ltda.               | Brazil                    |
| Tantalum | Changsha South Tantalum Niobium Co., Ltd.       | China                     |
| Tantalum | Conghua Tantalum and Niobium Smeltry            | China                     |
| Tantalum | Duoluoshan                                      | China                     |
| Tantalum | F&X Electro-Materials Ltd.                      | China                     |
| Tantalum | FIR Metals & Resource Ltd.                      | China                     |
| Tantalum | Guangdong Zhiyuan New Material Co., Ltd.        | China                     |

| Metal    | Smelter Name  | Country                  |
|----------|---|--------------------------|
| Tantalum | Hengyang King Xing Lifeng New Materials Co., Ltd.   | China                    |
| Tantalum | Jiangxi Dinghai Tantalum & Niobium Co., Ltd.        | China                    |
| Tantalum | Jiangxi Tuohong New Raw Material                    | China                    |
| Tantalum | JiuJiang JinXin Nonferrous Metals Co., Ltd.         | China                    |
| Tantalum | Jiujiang Nonferrous Metals Smelting Company Limited | China                    |
| Tantalum | Jiujiang Zhongao Tantalum & Niobium Co., Ltd.       | China                    |
| Tantalum | King-Tan Tantalum Industry Ltd.                     | China                    |
| Tantalum | Ningxia Orient Tantalum Industry Co., Ltd.          | China                    |
| Tantalum | RFH Tantalum Smeltry Co., Ltd.                      | China                    |
| Tantalum | XinXing HaoRong Electronic Material Co., Ltd.       | China                    |
| Tantalum | Yichun Jin Yang Rare Metal Co., Ltd.                | China                    |
| Tantalum | Zhuzhou Cemented Carbide Group Co., Ltd.            | China                    |
| Tantalum | NPM Silmet AS                                       | Estonia                  |
| Tantalum | H.C. Starck Hermsdorf GmbH                          | Germany                  |
| Tantalum | H.C. Starck Smelting GmbH & Co. KG                  | Germany                  |
| Tantalum | H.C. Starck Tantalum and Niobium GmbH               | Germany                  |
| Tantalum | Metallurgical Products India Pvt., Ltd.             | India                    |
| Tantalum | Global Advanced Metals Aizu                         | Japan                    |
| Tantalum | H.C. Starck Ltd.                                    | Japan                    |
| Tantalum | Mitsui Mining and Smelting Co., Ltd.                | Japan                    |
| Tantalum | Taki Chemical Co., Ltd.                             | Japan                    |
| Tantalum | Ulba Metallurgical Plant JSC                        | Kazakhstan               |
| Tantalum | KEMET Blue Metals                                   | Mexico                   |
| Tantalum | Power Resources Ltd.                                | Republic of<br>Macedonia |
| Tantalum | Solikamsk Magnesium Works OAO                       | Russian<br>Federation    |
| Tantalum | H.C. Starck Co., Ltd.                               | Thailand                 |
| Tantalum | D Block Metals, LLC                                 | United States            |
| Tantalum | Exotech Inc.  | United States            |
| Tantalum | Global Advanced Metals Boyertown                    | United States            |
| Tantalum | H.C. Starck Inc.                                    | United States            |
| Tantalum | Hi-Temp Specialty Metals, Inc.                      | United States            |
| Tantalum | Kemet Blue Powder                                   | United States            |
| Tantalum | QuantumClean  | United States            |
| Tantalum | Telex Metals  | United States            |
| Tin      | Metallo-Chimique N.V.                               | Belgium                  |
| Tin      | EM Vinto  | Bolivia                  |
| Tin      | Operaciones Metalurgical S.A.                       | Bolivia                  |
| Tin      | Cooperativa Metalurgica de Rondonia Ltda.           | Brazil                   |
| Tin      | Magnu's Minerais Metais e Ligas Ltda.               | Brazil                   |

| Metal | Smelter Name                                      | Country   |
|-------|---|-----------|
| Tin   | Melt Metais e Ligas S.A.                          | Brazil    |
| Tin   | Mineracao Taboca S.A.                             | Brazil    |
| Tin   | Resind Industria e Comercio Ltda.                 | Brazil    |
| Tin   | Soft Metais Ltda.                                 | Brazil    |
| Tin   | White Solder Metalurgia e Mineracao Ltda.         | Brazil    |
| Tin   | Chenzhou Yunxiang Mining and Metallurgy Co., Ltd. | China     |
| Tin   | China Tin Group Co., Ltd.                         | China     |
| Tin   | Gejiu Fengming Metallurgy Chemical Plant          | China     |
| Tin   | Gejiu Jinye Mineral Company                       | China     |
| Tin   | Gejiu Non-Ferrous Metal Processing Co., Ltd.      | China     |
| Tin   | Guanyang Guida Nonferrous Metal Smelting Plant    | China     |
| Tin   | HuiChang Hill Tin Industry Co., Ltd.              | China     |
| Tin   | Jiangxi Ketai Advanced Material Co., Ltd.         | China     |
| Tin   | Yunnan Tin Company Limited                        | China     |
| Tin   | CV Ayi Jaya                                       | Indonesia |
| Tin   | CV Dua Sekawan                                    | Indonesia |
| Tin   | CV Gita Pesona                                    | Indonesia |
| Tin   | CV Serumpun Sebalai                               | Indonesia |
| Tin   | CV Tiga Sekawan                                   | Indonesia |
| Tin   | CV United Smelting                                | Indonesia |
| Tin   | CV Venus Inti Perkasa                             | Indonesia |
| Tin   | PT Aries Kencana Sejahtera                        | Indonesia |
| Tin   | PT Artha Cipta Langgeng                           | Indonesia |
| Tin   | PT ATD Makmur Mandiri Jaya                        | Indonesia |
| Tin   | PT Babel Inti Perkasa                             | Indonesia |
| Tin   | PT Bangka Prima Tin                               | Indonesia |
| Tin   | PT Bangka Tin Industry                            | Indonesia |
| Tin   | PT Belitung Industri Sejahtera                    | Indonesia |
| Tin   | PT Bukit Timah                                    | Indonesia |
| Tin   | PT DS Jaya Abadi                                  | Indonesia |
| Tin   | PT Eunindo Usaha Mandiri                          | Indonesia |
| Tin   | PT Inti Stania Prima                              | Indonesia |
| Tin   | PT Karimun Mining                                 | Indonesia |
| Tin   | PT Kijang Jaya Mandiri                            | Indonesia |
| Tin   | PT Lautan Harmonis Sejahtera                      | Indonesia |
| Tin   | PT Menara Cipta Mulia                             | Indonesia |
| Tin   | PT Mitra Stania Prima                             | Indonesia |
| Tin   | PT O.M. Indonesia                                 | Indonesia |
| Tin   | PT Panca Mega Persada                             | Indonesia |
| Tin   | PT Prima Timah Utama                              | Indonesia |

| Metal    | Smelter Name  | Country       |
|----------|---|---------------|
| Tin      | PT Refined Bangka Tin   | Indonesia     |
| Tin      | PT Sariwiguna Binasentosa                                     | Indonesia     |
| Tin      | PT Stanindo Inti Perkasa                                      | Indonesia     |
| Tin      | PT Sukses Inti Makmur   | Indonesia     |
| Tin      | PT Sumber Jaya Indah  | Indonesia     |
| Tin      | PT Timah (Persero) Tbk Kundur                                 | Indonesia     |
| Tin      | PT Timah (Persero) Tbk Mentok                                 | Indonesia     |
| Tin      | PT Tinindo Inter Nusa   | Indonesia     |
| Tin      | PT Tommy Utama  | Indonesia     |
| Tin      | Dowa  | Japan         |
| Tin      | Mitsubishi Materials Corporation                              | Japan         |
| Tin      | Malaysia Smelting Corporation (MSC)                           | Malaysia      |
| Tin      | Minsur  | Peru          |
| Tin      | O.M. Manufacturing Philippines, Inc.                          | Philippines   |
| Tin      | Fenix Metals  | Poland        |
| Tin      | Elmet S.L.U.  | Spain         |
| Tin      | Rui Da Hung   | Taiwan        |
| Tin      | O.M. Manufacturing (Thailand) Co., Ltd.                       | Thailand      |
| Tin      | Thaisarco   | Thailand      |
| Tin      | Alpha   | United States |
| Tin      | Metallic Resources, Inc.                                      | United States |
| Tin      | VQB Mineral and Trading Group JSC                             | Vietnam       |
| Tungsten | Wolfram Bergbau und Hutten AG                                 | Austria       |
| Tungsten | Chenzhou Diamond Tungsten Products Co., Ltd.                  | China         |
| Tungsten | Chongyi Zhangyuan Tungsten Co., Ltd.                          | China         |
| Tungsten | Fujian Jinxin Tungsten Co., Ltd.                              | China         |
| Tungsten | Ganzhou Huaxing Tungsten Products Co., Ltd.                   | China         |
| Tungsten | Ganzhou Jiangwu Ferrotungsten Co., Ltd.                       | China         |
| Tungsten | Ganzhou Seadragon W & Mo Co., Ltd.                            | China         |
| Tungsten | Guangdong Xianglu Tungsten Co., Ltd.                          | China         |
| Tungsten | Hunan Chenzhou Mining Co., Ltd.                               | China         |
| Tungsten | Hunan Chuangda Vanadium Tungsten Co., Ltd. Wuji               | China         |
| Tungsten | Hunan Chunchang Nonferrous Metals Co., Ltd.                   | China         |
| Tungsten | Jiangwu H.C. Starck Tungsten Products Co., Ltd.               | China         |
| Tungsten | Jiangxi Gan Bei Tungsten 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         |
| Tungsten | Jiangxi Yaosheng Tungsten Co., Ltd.                           | China         |
| Tungsten | Malipo Haiyu Tungsten Co., Ltd.                               | China         |

| Metal    | Smelter Name   | Country               |
|----------|--|-----------------------|
| Tungsten | South-East Nonferrous Metal Company Limited of Hengyang City | China                 |
| Tungsten | Xiamen Tungsten (H.C.) Co., Ltd.                             | China                 |
| Tungsten | Xiamen Tungsten Co., Ltd.                                    | China                 |
| Tungsten | Xinfeng Huarui Tungsten & Molybdenum New Material Co., Ltd.  | China                 |
| Tungsten | Xinhai Rendan Shaoguan Tungsten Co., Ltd.                    | China                 |
| Tungsten | H.C. Starck Smelting GmbH & Co. KG                           | Germany               |
| Tungsten | H.C. Starck Tungsten GmbH                                    | Germany               |
| Tungsten | A.L.M.T. TUNGSTEN Corp.                                      | Japan                 |
| Tungsten | Japan New Metals Co., Ltd.                                   | Japan                 |
| Tungsten | Philippine Chuangxin Industrial Co., Inc.                    | Philippines           |
| Tungsten | Hydrometallurg, JSC  | Russian<br>Federation |
| Tungsten | Moliren Ltd.   | Russian<br>Federation |
| Tungsten | Unecha Refractory metals plant                               | Russian<br>Federation |
| Tungsten | Woltech Korea Co., Ltd.                                      | South Korea           |
| Tungsten | Global Tungsten & Powders Corp.                              | United States         |
| Tungsten | Kennametal Fallon  | United States         |
| Tungsten | Kennametal Huntsville  | United States         |
| Tungsten | Niagara Refining LLC   | United States         |
| Tungsten | Asia Tungsten Products Vietnam Ltd.                          | Vietnam               |
| Tungsten | Nui Phao H.C. Starck Tungsten Chemicals Manufacturing LLC    | Vietnam               |
| Tungsten | Tejing (Vietnam) Tungsten Co., Ltd.                          | Vietnam               |
| Tungsten | Vietnam Youngsun Tungsten Industry Co., Ltd.                 | Vietnam               |

Annex I – Lists of smelters/refiners CFSP participating smelters/refiners

| Metal    | Smelter Name   | Country        |
|----------|--|----------------|
| Gold     | Tony Goetz NV  | Belgium        |
| Gold     | Marsam Metals  | Brazil         |
| Gold     | SAFINA A.S.  | Czech Republic |
| Gold     | SAAMP  | France         |
| Gold     | Bangalore Refinery   | India          |
| Gold     | Chugai Mining  | Japan          |
| Gold     | Kazakhmys Smelting LLC   | Kazakhstan     |
| Gold     | TOO Tau-Ken-Altyn  | Kazakhstan     |
| Gold     | Modeltech Sdn Bhd  | Malaysia       |
| Gold     | Remondis Argentia B.V.   | Netherlands    |
| Gold     | KGHM Polska Miedz Spolka Akcyjna   | Poland         |
| Gold     | HeeSung Metal Ltd.   | South Korea    |
| Gold     | Samwon Metals Corp.  | South Korea    |
| Gold     | SungEel HiTech   | South Korea    |
| Gold     | Navoi Mining and Metallurgical Combinat  | Uzbekistan     |
| Tin      | Gejiu Kai Meng Industry and Trade LLC  | China          |
| Tin      | Gejiu Yunxin Nonferrous Electrolysis Co., Ltd.   | China          |
| Tin      | Gejiu Zili Mining And Metallurgy Co., Ltd.   | China          |
| Tin      | Huichang Jinshunda Tin Co., Ltd.   | China          |
| Tin      | Nankang Nanshan Tin Manufactory Co., Ltd.  | China          |
| Tin      | Yunnan Chengfeng Non-ferrous Metals Co., Ltd.  | China          |
| Tin      | Modeltech Sdn Bhd  | Malaysia       |
| Tin      | Electro-Mechanical Facility of the Cao Bang Minerals & Metallurgy<br>Joint Stock Company | Vietnam        |
| Tungsten | ACL Metais Eireli  | Brazil         |
| Tungsten | Ganzhou Haichuang Tungsten Co., Ltd.   | China          |

Annex I – Lists of smelters/refiners Other smelters/refiners

| Metal | Smelter Name  | Country   |
|-------|---|-----------|
| Gold  | L'Orfebre S.A.  | Andorra   |
| Gold  | Morris and Watson Gold Coast                            | Australia |
| Gold  | House of Currency of Brazil (Casa da Moeda do Brazil)   | Brazil    |
| Gold  | Baiyin Nonferrous Metals Corporation (BNMC)             | China     |
| Gold  | Daye Non-Ferrous Metals Mining Ltd.                     | China     |
| Gold  | Gansu Seemine Material Hi-Tech Co., Ltd.                | China     |
| Gold  | Great Wall Precious Metals Co., Ltd. of CBPM            | China     |
| Gold  | Guangdong Hua Jian Trade Co., Ltd.                      | China     |
| Gold  | Guangdong Jinding Gold Limited                          | China     |
| Gold  | Guoda Safina High-Tech Environmental Refinery Co., Ltd. | China     |
| Gold  | Hang Seng Technology                                    | China     |
| Gold  | Hangzhou Fuchunjiang Smelting Co., Ltd.                 | China     |
| Gold  | Henan Yuguang Gold & Lead Co., Ltd.                     | China     |
| Gold  | Hetai Gold Mineral Guangdong Co., Ltd.                  | China     |
| Gold  | Hunan Chenzhou Mining Co., Ltd.                         | China     |
| Gold  | Jin Jinyin Refining Co., Ltd.                           | China     |
| Gold  | Jinlong Copper Co., Ltd.                                | China     |
| Gold  | Lingbao Gold Co., Ltd.                                  | China     |
| Gold  | Lingbao Jinyuan Tonghui Refinery Co., Ltd.              | China     |
| Gold  | Luoyang Zijin Yinhui Gold Refinery Co., Ltd.            | China     |
| Gold  | Nankang Metal Material Co. Ltd.                         | China     |
| Gold  | Penglai Penggang Gold Industry Co., Ltd.                | China     |
| Gold  | Shan Dong Huangjin                                      | China     |
| Gold  | Shan Tou Shi Yong Yuan Jin Shu Zai Sheng Co., Ltd.      | China     |
| Gold  | Shandong Hengbang Smelter Co., Ltd.                     | China     |
| Gold  | Shandong Tiancheng Biological Gold Industrial Co., Ltd. | China     |
| Gold  | Shandong Yanggu Xiangguang Co., Ltd.                    | China     |
| Gold  | Shangdong Humon Smelting Co., Ltd.                      | China     |
| Gold  | Shenzhen Heng Zhong Industry Co., Ltd.                  | China     |
| Gold  | Shenzhen Zhonghenglong Real Industry Co., Ltd.          | China     |
| Gold  | Sino-Platinum Metals Co., Ltd.                          | China     |
| Gold  | Super Dragon Technology Co., Ltd.                       | China     |
| Gold  | Taicang City Nancang Metal Material Co., Ltd.           | China     |
| Gold  | Tongling Nonferrous Metals Group Co., Ltd.              | China     |
| Gold  | Viagra Di precious metals (Zhaoyuan) Co., Ltd.          | China     |
| Gold  | Wuzhong Group   | China     |
| Gold  | Yunnan Copper Industry Co., Ltd.                        | China     |

| Metal    | Smelter Name   | Country                 |
|----------|--|-------------------------|
| Gold     | Zhe Jiang Guang Yuan Noble Metal Smelting Factory                    | China                   |
| Gold     | Zhongkuang Gold Industry Co., Ltd.                                   | China                   |
| Gold     | Degussa Sonne / Mond Goldhandel GmbH                                 | Germany                 |
| Gold     | GCC Gujrat Gold Centre Pvt. Ltd.                                     | India                   |
| Gold     | Sai Refinery   | India                   |
| Gold     | Italpreziosi   | Italy                   |
| Gold     | Safimet S.p.A  | Italy                   |
| Gold     | Kosak Seiren   | Japan                   |
| Gold     | Nihon Superior Co., Ltd.   | Japan                   |
| Gold     | State Research Institute Center for Physical Sciences and Technology | Lithuania               |
| Gold     | Caridad  | Mexico                  |
| Gold     | Morris and Watson  | New Zealand             |
| Gold     | Kyshtym Copper-Electrolytic Plant ZAO                                | Russian                 |
| Cold     | L'amada Compony For Javaley  | Federation              |
| Gold     | L'azurde Company For Jeweiry   | Saudi Arabia            |
| Gold     | HwaSeong CJ CO., LTD.  | South Korea             |
| Gold     | Sudan Gold Refinery  | Sudan                   |
| Gold     | Cendres + Metaux S.A.  | Switzerland             |
| Gold     | Chin-Leep Enterprise Co., Ltd.                                       | Taiwan                  |
| Gold     | Wam Technologies Taiwan Co., Ltd.                                    | Taiwan                  |
| Gold     | Atasay Kuyumculuk Sanayi Ve Ticaret A.S.                             | Turkey                  |
| Gold     | Kaloti Precious Metals   | United Arab<br>Emirates |
| Gold     | Abington Reldan Metals, LLC  | United States           |
| Gold     | Elemetal Refining, LLC   | United States           |
| Gold     | Nyrstar Metals   | United States           |
| Gold     | Pease & Curren   | United States           |
| Gold     | Precious Metals Sales Corp.  | United States           |
| Gold     | Sabin Metal Corp.  | United States           |
| Gold     | So Accurate Group, Inc.  | United States           |
| Gold     | Universal Precious Metals Refining Zambia                            | Zambia                  |
| Gold     | Fidelity Printers and Refiners Ltd.                                  | Zimbabwe                |
| Tantalum | ANHUI HERRMAN IMPEX CO.  | China                   |
| Tantalum | Hunan Chenzhou Mining Co., Ltd.                                      | China                   |
| Tantalum | Ningxia Non-Ferrous Metal Smeltery                                   | China                   |
| Tantalum | Shanghai Jiangxi Metals Co., Ltd.                                    | China                   |
| Tin      | Estanho de Rondonia S.A.   | Brazil                  |
| Tin      | Super Ligas  | Brazil                  |
| Tin      | CNMC (Guangxi) PGMA Co., Ltd.  | China                   |
| Tin      | Dongguan City Xida Soldering Tin Products Co.                        | China                   |
| Tin      | Gejiu Yunxi Group Corp.  | China                   |

| Metal | Smelter Name                                       | Country       |
|-------|--|---------------|
| Tin   | Guangxi Nonferrous Metals Group                    | China         |
| Tin   | Guangxi Zhongshan Jin Yi Smelting Co., Ltd.        | China         |
| Tin   | Hongqiao Metals (Kunshan) Co., Ltd.                | China         |
| Tin   | Hunan Xianghualing tin                             | China         |
| Tin   | Jiangxi Yaosheng Tungsten Co., Ltd.                | China         |
| Tin   | Ju Tai Industrial Co., Ltd.                        | China         |
| Tin   | Ming Li Jia smelt Metal Factory                    | China         |
| Tin   | Shan Tou Shi Yong Yuan Jin Shu Zai Sheng Co., Ltd. | China         |
| Tin   | Shangrao Xuri Smelting Factory                     | China         |
| Tin   | Shenzhen Hong Chang Metal Manufacturing Factory    | China         |
| Tin   | Sichuan Guanghan Jiangnan casting smelters         | China         |
| Tin   | Suzhou Nuonengda Chemical Co., Ltd.                | China         |
| Tin   | Taicang City Nancang Metal Material Co., Ltd.      | China         |
| Tin   | Tianshui Ling Bo Technology Co., Ltd.              | China         |
| Tin   | TIN PLATING GEJIU                                  | China         |
| Tin   | Top-Team Technology (Shenzhen) Ltd.                | China         |
| Tin   | Wang Yu Manufacturing Co., Ltd.                    | China         |
| Tin   | Wu Xi Shi Yi Zheng Ji Xie She Bei Company          | China         |
| Tin   | WUJIANG CITY LUXE TIN FACTORY                      | China         |
| Tin   | Xianghualing Tin Industry Co., Ltd.                | China         |
| Tin   | Xianghualing Tin Minerals                          | China         |
| Tin   | Xin Furukawa Metal (Wuxi) Co., Ltd.                | China         |
| Tin   | XURI   | China         |
| Tin   | Yao Zhang  | China         |
| Tin   | Yifeng Tin   | China         |
| Tin   | Yunnan Chengo Electric Smelting Plant              | China         |
| Tin   | Yunnan Industrial Co., Ltd.                        | China         |
| Tin   | Zhuhai Quanjia                                     | China         |
| Tin   | PT Cipta Persada Mulia                             | Indonesia     |
| Tin   | PT NATARI  | Indonesia     |
| Tin   | Fuji Metal Mining Corp.                            | Japan         |
| Tin   | Materials Eco-Refining Co., Ltd.                   | Japan         |
| Tin   | Metahub Industries Sdn. Bhd.                       | Malaysia      |
| Tin   | Jau Janq Enterprise Co., Ltd.                      | Taiwan        |
| Tin   | Minchali Metal Industry Co., Ltd.                  | Taiwan        |
| Tin   | Taiwan high-tech Co., Ltd.                         | Taiwan        |
| Tin   | Colonial Metals, Inc.                              | United States |
| Tin   | Shapiro  | United States |
| Tin   | Spectro Alloys Corp.                               | United States |
| Tin   | An Thai Minerals Co., Ltd.                         | Vietnam       |

| Metal    | Smelter Name   | Country |
|----------|--|---------|
| Tin      | An Vinh Joint Stock Mineral Processing Company   | Vietnam |
| Tin      | Nghe Tinh Non-Ferrous Metals Joint Stock Company   | Vietnam |
| Tin      | Thai Nguyen Nonferrous Metal Co.   | Vietnam |
| Tin      | Tuyen Quang Non-Ferrous Metals Joint Stock Company   | Vietnam |
| Tungsten | Dayu Weiliang Tungsten Co., Ltd.   | China   |
| Tungsten | Fujian Ganmin Rare Metal Co., Ltd. (Jiangxi Rare Earth & Rare Metals Tungsten Group Corp.) | China   |
| Tungsten | Ganzhou Yatai Tungsten Co., Ltd.   | China   |
| Tungsten | Jiangsu Hetian Sci-Tech Material Co., Ltd.   | China   |
| Tungsten | Jiangxi Dayu Longxintai Tungsten Co., Ltd.   | China   |
| Tungsten | Jiangxi Minmetals Gao'an Non-ferrous Metals Co., Ltd.                                      | China   |
| Tungsten | Luoyang Mudu Tungsten & Molybdenum Technology Co., Ltd.                                    | China   |
| Tungsten | Zhangzhou Chuen Bao Apt Smeltery Co., Ltd.   | China   |

Based on country of origin information provided by the CFSI for CFSP compliant processing facilities, countries of origin of the 3TG in our products may include:

Angola, Australia, Austria, Benin, Bolivia, Brazil, Burkina Faso, Burundi, Cambodia, Canada, Central African Republic, Chile, China, Colombia, Democratic Republic of the Congo, Ecuador, Eritrea, Ethiopia, France, Ghana, Guatemala, Guinea, Guyana, Honduras, India, Indonesia, Japan, Laos, Madagascar, Malaysia, Mali, Mexico, Mongolia, Mozambique, Myanmar, Namibia, Nicaragua, Nigeria, Panama, Peru, Portugal, Republic of the Congo, Russia, Rwanda, Senegal, Sierra Leone, South Africa, South Sudan, Spain, Tanzania, Thailand, Togo, Uganda, United States, Uzbekistan, Vietnam, Zambia and Zimbabwe.