
Independent Practitioner's Limited Assurance Report

Heraeus Deutschland GmbH & Co. KG
Hanau

Limited assurance engagement on the Refiner's Compliance Report for
Heraeus Deutschland GmbH & Co. KG for the period 1 January to
31 December 2017

Auftrag: 0.0852046.001



Independent Practitioner's Limited Assurance Report

To Heraeus Deutschland GmbH & Co. KG, Hanau

We have been engaged by Heraeus Deutschland GmbH & Co. KG, Hanau, (the "Refiner") to perform a limited assurance engagement on the Refiner's Compliance Report prepared by the Refiner for the business group "Heraeus Deutschland GmbH & Co. KG" (HDE) as defined in Table 5 of the Compliance Report for the period 1 January to 31 December 2017 (the "Refiner's Compliance Report").

Responsibilities of the Executive Directors

The executive directors of the Refiner are responsible for the preparation of the Refiner's Compliance Report in accordance with the LBMA Responsible Gold Guidance (version 7) as of 1 September 2017, as well as the Supplement on Tin, Tantalum and Tungsten of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas as of April 2016 (hereafter the "Guidance").

This responsibility of Company's executive directors includes establishing appropriate risk management and internal controls from which the reported information is derived. The criteria identified by the executive directors as relevant for demonstrating compliance with the Guidance are the activities described in the Refiner's Compliance Report. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Refiner's Compliance Report, which is free of material misstatements due to intentional or unintentional errors.

Independence and Quality Control of the Audit Firm

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

Our audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Standard on Quality Control 1 published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis - IDW QS 1) – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

In conducting our engagement, we confirm that we satisfy the criteria for assurance providers as set out in the Guidance to carry out the assurance engagement.

Practitioner's Responsibility

Our responsibility is to express a limited assurance conclusion on the Refiner's Compliance Report based on the assurance engagement we have performed.

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the Refiner's Compliance Report.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the IAASB and the supplementary guidance set out in the LBMA Responsible Gold Programme - Third Party Audit Guidance (version 3) as of 1 September 2017 (the "Audit Guidance"). This Audit Guidance requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the Refiner's Compliance Report, prepared by the Refiner for the business group Heraeus Deutschland GmbH & Co. KG (HDE) for the period 1 January to 31 December 2017, did not in all material respects, describe fairly the activities undertaken during the year to demonstrate compliance, and management's overall conclusion contained therein, is not in accordance with the requirements of the LBMA Responsible Gold Guidance (version 7) as of 1 September 2017, as well as the Supplement on Tin, Tantalum and Tungsten of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas as of April 2016.

In a limited assurance engagement the assurance procedures are less in extent than for a reasonable assurance engagement and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the practitioner's judgment. This includes the assessment of the risks of material misstatements of the Refiner's Compliance Report with regard to the Guidance.

Within the scope of our assurance engagement, we performed amongst others the following assurance procedures and further activities:

- Interviews with the compliance officers in charge of the preparation of the Refiner's Compliance Report;
- Interviews with management and employees of departments in charge of recycling, purchasing, material management and trading;
- Inspection of relevant corporate guidelines and documents describing the management systems, due diligence and risk management approach towards a responsible supply chain;
- Review of documentation of requirements on the group-wide processes for collecting, analysing and aggregating data on the supply chain of gold, tin, tantalum and tungsten;
- Performance of site visits at the Refiner's locations in Hanau (Germany) and Hong Kong (China) as part of the inspection of relevant systems, processes and controls; including process walkthroughs from supplier selection to materials receipt and lot processing;
- Evaluation of the consistency of the statements provided in the Refiner's Compliance Report with the findings obtained during our engagement.

Inherent limitations

Non-financial information, such as that included in the Refiner's Compliance Report, is subject to more inherent limitations than financial information, given the more qualitative characteristics of the subject matter and the methods used for determining such information. The methods used by the Refiner to comply with the Guidance may differ. It is important to read the Refiner's conflict minerals supply chain policy available in the download section on Refiner's website:

<http://herae.us/conflictminerals>

Assurance Conclusion

Based on the assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the Refiner's Compliance Report, prepared by Heraeus Deutschland GmbH & Co. KG, Hanau, for the business group Heraeus Deutschland GmbH & Co. KG (HDE) for the period 1 January to 31 December 2017, did not in all material respects, describe fairly the activities undertaken during the year to demonstrate compliance, and management's overall conclusion contained therein, is not in accordance with the requirements of the LBMA Responsible Gold Guidance (version 7) as of 1 September 2017, as well as the Supplement on Tin, Tantalum and Tungsten of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas as of April 2016.

Intended Use of the Assurance Report

We issue this report on the basis of the engagement agreed with the Refiner. The assurance engagement has been performed for purposes of the Refiner and the report is solely intended to inform the Refiner as to the results of the assurance engagement. The report is not intended to provide third parties with support in making (financial) decisions. Our responsibility lies solely toward the Refiner. We do not assume any responsibility towards third parties.

We refer to the fact that the Refiner's Compliance Report subject to our assurance engagement comprises the Annex "List of countries of origin of gold (both Mined and Recycled) and amount received from each origin for the reporting period". In accordance with the LBMA Responsible Gold Guidance (version 7) and the treatment of the Refiner this Annex detailing the countries and amounts of origin of gold has to be submitted to the LBMA Executive only and does not need to be disclosed publicly.

Munich, 22 March 2018

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Hendrik Fink
Wirtschaftsprüfer
(German Public Auditor)

ppa. Axel Faupel

Appendix

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I Refiner's Compliance Report1

General Terms of Engagement: Allgemeine Auftragsbedingungen für Wirtschaftsprüfer
und Wirtschaftsprüfungsgesellschaften vom 1. Januar 2017

Heraeus Compliance Report 2017 for HDE

| Table 1: Refiner's details | |
|---|--|
| Refiner's name | Heraeus Deutschland GmbH & Co. KG - HDE |
| Entities and locations | Please refer to addendum Table 5 – HDE is creating this Compliance Report also on behalf of the entities and locations listed in this addendum |
| Reporting year-end | 31.12.2017 |
| Date of Report | 2018-03-16 |
| Senior Management at HDE responsible for this report: | Andre Kobelt, CEO of HDE: andre.kobelt@heraeus.com |
| <p>Heraeus is a globally active precious metal and technology group based in Hanau, near Frankfurt, family-owned for more than 165 years. Our business groups cover precious metals, materials and technologies, sensors, biomaterials, medical and pharmaceutical products, quartz glass, and specialty light sources.</p> <p>In the 2016 financial year, the FORTUNE Global 500 listed company generated revenues without precious metals of €2.0 bn and a total revenue of €21.5 bn. With approximately 12,400 employees worldwide in more than 100 subsidiaries in 40 countries, Heraeus holds a leading position in its global markets. More: www.heraeus.com</p> <p>Heraeus Deutschland GmbH & Co. KG - HDE is one of the largest Gold refiners globally.</p> <p>Its Hong Kong based Gold refinery Heraeus Ltd. alone is refining more than 200 tons of Gold annually. Further Heraeus Gold refiners are located in Hanau, Newark and Santa Fee Springs.</p> <p>This Heraeus Compliance Report covers the selected refining and downstream companies mentioned in the addendum Table 5, that belong to the global business unit "Heraeus Deutschland" (HDE).</p> | |

Heraeus evaluation

| Table 2: Summary of activities undertaken to demonstrate compliance | |
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| Step 1: Establish strong company management systems | |
| Compliance Statement with Requirement: We have fully complied with Step 1: Establish strong management systems. | |
| 1. Has the refiner adopted a company policy regarding due diligence for supply chains of Gold, Tin, Tantalum, and Tungsten? | |
| <p>The Heraeus group has adopted a company-wide policy binding for all entities (including HDE's refinery and downstream entities) regarding due diligence for the supply chain of conflict minerals including Gold, Tin, Tungsten and Tantalum as well as other precious metals Platinum, Palladium, Silver and Rhodium .</p> <p>Comments and Demonstration of Compliance: Already in 2007 we started formalizing our supply chain policy for Precious Metals, which is based on our Code of Conduct and an integral part of our responsibility-conscious management structure.</p> <p>HDE operates strictly in accordance with "LBMA Responsible Gold Guidance and the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas" – Third edition 2016.</p> <p>Our new "guideline for sustainable sourcing" – introduced in 2016 further strengthens our corporate efforts to comply with the model set out in the Annex II of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas. This sets out our responsibility for conducting risk based due diligence, screening and monitoring of all transactions and governance structures in place. The latest supply chain policy can be found on our website in the downloads section: www.herae.us/conflictminerals</p> | |

Heraeus Compliance Report 2017 for HDE

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| <p>2. Has the refiner set up an internal management structure to support supply chain due diligence?</p> |
| <p>Heraeus Precious Metals has set up an internal management structure to support supply chain due diligence.</p> |
| <p>Comments and Demonstration of Compliance: An internal management system has been set up to define the governance, roles and responsibilities, internal audit, communication and senior management review as per the adopted policy. The assigned compliance officer on group level designs, supervises and reviews the overall process and is supported by local compliance officers of all entities included in this report. The compliance officer has a direct reporting line to the executive committee.</p> |
| <p>3. Has the refiner established a strong internal system of due diligence, controls and transparency over the supply chains of Gold, Tin, Tantalum and Tungsten, including traceability and identification of other supply chain actors?</p> |
| <p>Comments and Demonstration of Compliance: <u>Refiner units:</u> We have a robust 'lot' receipts process, and specific documents must be received and transactional details entered before we process any gold-bearing and other conflict materials, like Tin, Tantalum and Tungsten. Each lot received is accurately registered in our transactional system and ensures complete traceability within our production streams. We carry out specific controls regarding received materials before processing incoming material as outlined in our internal guidelines. <u>Downstream units:</u> We have a robust 'lot' receipts process, and specific documents must be received and transactional details entered before we process any gold-bearing and other conflict materials, including Tin, Tantalum and Tungsten, to ensure, that all raw material used for our products are conflict free. Specific controls regarding received materials are carried out before processing incoming material as outlined in our internal guidelines. Through regular training of our employees we ensure that our guidelines are followed through; any form of non-conformance is unacceptable and reported to the compliance officer and senior management. No such escalation was necessary during the reporting period.</p> |
| <p>4. Has the refiner strengthened company engagement with Gold, Tin, Tantalum and Tungsten supplying counterparties, and where possible, assist Gold, Tin, Tantalum and Tungsten supplying counterparties in building due diligence capabilities?</p> |
| <p>Comments and Demonstration of Compliance: All new suppliers have to sign the latest version of our "CODE OF CONDUCT MATERIAL QUESTIONNAIRE FOR PM SUPPLIERS OF HERAEUS" before we are entering into a new business relationship. We are renewing our due diligence checks for all our suppliers every one, two or three years based on our risk assessment and archived the results in a database. We conducted several successful audits of our mining partners to verify they are in line with the requirements set forth in our supply chain guideline, with special focus on Child labor, Human rights and environmental issues. In the reporting year, we continued to engage in various business organizations like IPA (International Platinum organization), EPMF (European Precious Metals Federation, FVEM (Fachvereinigung Edelmetalle) and in addition events organized for Heraeus' customers to promote awareness and due diligence measurements regarding Gold, Tin, Tantalum, and Tungsten and what Heraeus is doing in this regard. We did also engage in encouraging a binding new EU regulation on conflict minerals through engagement in above mentioned business organizations and strongly opposed the "de-minimis" limit of 100Kg for Gold; unfortunately so far without much success. We also started discussions with the German "Federal Institute for Geosciences and Natural Resources" to look for opportunities to directly support local mining communities in Africa, Asia or South America; this process is still ongoing.</p> |
| <p>5. Has the refiner established a company-wide communication mechanism to promote broad based employee participation and risk identification to management?</p> |
| <p>Comments and Demonstration of Compliance: Heraeus is using an external compliance hotline allowing employees to voice concerns over any compliance violations and especially over the Gold, Tin, Tantalum and Tungsten supply chain or other identified risks regarding conflict minerals or other compliance issues. Our external Compliance Hotline can be contacted by e-mail in any language or by telephone in German and English; that information was widely published throughout our organization and is readily available on our portal. We do also have an internal functional mailbox which is reviewed by the compliance officer of the Heraeus group. No concerns were raised by employees in the reporting year 2017 with regards to conflict minerals.</p> |

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| <p>Step 2: Identify and assess risks in the supply chain</p> |
| <p>Compliance Statement with Requirement: We have fully complied with Step 2: Identify and assess risks in the supply chain.</p> |
| <p>1. Does the refiner have a process to identify risks in the supply chain?</p> |
| <p>Heraeus has processes in place to identify the risks in the supply chain</p> |
| <p>Comments and Demonstration of Compliance: We identify and assess risks in the supply chain. For every supplier we have established a client database and allocated a risk profile according to our risk profile criteria. This process is a formal requirement before entering any business relationship with any Precious Metals counterparty, including but not limited to Gold as well as Tin, Tungsten and Tantalum supplying counterparties. Our due diligence process is carried out on a risk-based approach and follows our requirements as outlined in our “Code of Conduct for Precious Metal Suppliers of Heraeus”. We use proper process modelling techniques to map our KYC process – separated for Gold and 3T. These process models are used as a reference to identify possible risks in our supply chain and are also ideal training tools. Process modelling techniques are an integral part of our management system. Besides monitoring government regulations and reports from United Nations, we further formalized this step and use a list of web links from NGO’s and other international organizations we are regularly monitoring and if necessary expanding – at least quarterly. The list includes all the links published by the European Commission in its “DRAFT HANDBOOK” assisting “operators carrying out supply chain due diligence with the identification of conflict-affected and high-risk areas”. The results of that screening are evaluated and help us further strengthening our risk identifying steps. Based on this screening we have developed our own extensive list of high-risk countries and partners from those countries need to undergo enhanced due diligence measures. These steps are included in our general Risk Management System and are regularly reviewed.</p> |
| <p>2. Does the refiner assess risks in light of the standards of their due diligence system?</p> |
| <p>Heraeus assesses the risk in light of the standards of our due diligence system</p> |
| <p>Comments and Demonstration of Compliance: <u>Refiner units:</u> Supply chain due diligence comprising all measures required by the LBMA is performed before entering into a business relationship with any Gold, Tin, Tantalum and Tungsten supplying counterpart. We performed enhanced due diligence for higher risk categories, which includes all gold-bearing mining material and where Gold potentially originates from or transits via conflict affected areas and areas with human rights abuse, child labor or other high risk factors. In addition, we conduct appropriate scrutiny and monitoring of transactions undertaken through the course of the relationship following a risk based approach. <u>Downstream units:</u> For supply of Gold, Tin, Tungsten and Tantalum, we acknowledge the certification of LBMA and EICC for conflict free smelters. For any additional suppliers not listed there, we use either the EICC template to verify the sourcing or other means for proof of origin according to our risk assessment aligned with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas. Our global procurement team requests all our 3T suppliers to use only certified “conflict-free” smelters in the terms of CFSI. In case our due diligence assessment leaves any doubts we request additional documentations from our partners. We might suspend our business relationship with existing partners or refuse to open a relationship with new partners. To enforce our supply chain policy in the reporting year, we refused to enter into new business relationships with a notable number of potential partners, especially in the case of Gold supply. In addition, a few 3 T smelters & suppliers were blocked as well and we stopped sourcing material from them.</p> |
| <p>3. Does the refiner report risk assessment to the designated manager?</p> |
| <p>Comments and Demonstration of Compliance: The compliance officers and their teams assess the potential risks in-line with Heraeus internal guidelines as well as the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas as set out in the Annex II. If high risks are identified with new or existing business partners the Compliance Officer will deny acceptance of new business partner or cancel business with existing partners.</p> |

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Only if the business disagrees with the assessment of the compliance officer, the issue will be escalated to the CEO or CFO for final decision; no such escalation was necessary during the reporting period.

Senior management retains the ultimate control and responsibility for the supply chain of Gold, Tin, Tungsten and Tantalum.

Step 3: Design and implement a management system to respond to identified risks

Compliance Statement with Requirement:

We have fully complied with Step 3: Design and implement a management system to respond to identified risks.

1. Has the refiner devised a strategy for risk management of an identified risk by either (i) mitigation of the risk while continuing to trade; (ii) mitigation of the risk while suspending trade or (iii) disengagement from the risk

Heraeus has devised a strategy for risk management of an identified risk by either (i) mitigation of the risk while continuing to trade; (ii) mitigation of the risk while suspending trade or (iii) disengagement from the risk.

Comments and Demonstration of Compliance:

Heraeus has set-up an automated and ongoing screening of all business partners for identifying risks in the supply chain. In addition and based on the risk assessment a regular re-assessment of all business partners and transactions is established. In addition, the compliance officer will carefully assess any ad-hoc identified risk brought up by any stakeholder and will decide on necessary actions.

Based on our risk management we had to reject again a notable number of potential partners and to stop dealing with existing ones, especially in the case of our Gold supply chain.

2. Where a management strategy of risk mitigation is undertaken, it should include measureable steps to be taken and achieved, monitoring of performance, periodic reassessment of risk, and regular reporting to designated senior management.

Comments and Demonstration of Compliance:

Corresponding procedures are in place and are applied accordingly. In case our risk assessment identifies medium or high risks, we actively approach our suppliers to receive further information like proof of origin. If we cannot mitigate our risk assessment to at least medium risk level, we will terminate our supply agreement.

In the reporting period, we request further documentation from one of our major 3T supplier before continuing our relationship.

Step 4: Arrange for an independent third-party audit of the supply chain due diligence

Compliance Statement with Requirement:

We have fully complied with Step 4: Arrange for an independent third-party audit of the supply chain due diligence.

Comments and Demonstration of Compliance:

In 2016 Heraeus passed successfully the full audit (reasonable assurance) without instances of non-compliance so we engaged the services of our assurance provider PwC Germany for only a limited assurance in the reporting period of 2017; all our reports can be viewed in the download section here:

www.herae.us/conflictminerals

Step 5: Report on supply chain due diligence

Compliance Statement with Requirement:

We have fully complied with Step 5: Report on supply chain due diligence.

Comments

Further information and details of how Heraeus' systems, procedures, processes and controls have been implemented to align to the specific requirements in the *LBMA Responsible Gold Guidance* as well as the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas" – Third edition November 2016 have been set out in our supply chain policy which is available on our company website's download sections:

www.herae.us/conflictminerals

Heraeus Compliance Report 2017 for HDE

Heraeus overall conclusion

| Table 3: Management conclusion | |
|---|---|
| Is the refiner in compliance with the requirements of the LBMA Responsible Gold Guidance and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas for the reporting period? | |
| YES | In conclusion, Heraeus implemented effective management systems, procedures, processes and practices to conform to the requirements of the LBMA Responsible Gold Guidance as well as the “OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas” – Third edition 2016 - as explained above in Table 2, for the reporting year ending 31 st of December 2017. Heraeus is committed to continuous improvement and monitored internally on a regular basis. Any corrective actions identified will be implemented shortly. |

Other details

| Table 4: Other report comments |
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| If readers of this report wish to provide any feedback to Heraeus please contact the HDE compliance officer at: juergen.mueller@heraeus.com . |

Addendum

| Table 5: Relevant for the audit are the following Heraeus companies: | | |
|--|---|--|
| Business Group: Heraeus Deutschland - HDE | Value Chain Step | Locations: |
| Heraeus Deutschland GmbH & Co. KG | Refiner (LBMA GD Status) | Hanau, Germany |
| Heraeus Ltd. | Refiner (LBMA GD Status) | Hong Kong; People’s Republic of China |
| Heraeus Metals Germany GmbH and Co. KG | Downstream | Hanau, Germany |
| Heraeus Sensor Technology GmbH | Downstream | Kleinostheim, Germany |
| Heraeus Metals Hong Kong Ltd. | Downstream | Hong Kong; People’s Republic of China |
| Heraeus Metals Shanghai Ltd. | Downstream | Shanghai; People’s Republic of China |
| Heraeus Metals New York LLC | Downstream | New York, USA |
| Heraeus Precious Metals North America Conshohocken LLC | Downstream | Conshohocken, USA |
| Heraeus Precious Metals North America LLC | Refiner (COMEX listed for Au, Pd and Pt) | Newark, NJ, & Santa Fee Springs, CA; USA |
| Heraeus Medical Components, LLC | Downstream | St. Paul, MN; USA |
| Heraeus Medical Components Caribe, Inc. | Downstream | Dorado; Puerto Rico |
| Heraeus Materials Singapore Pte. Ltd. | Downstream | Singapore |
| Heraeus Materials S.A. | Downstream | Yverdon; Switzerland |
| Heraeus South Africa (Pty.) Ltd. | Downstream | Port Elizabeth; South Africa |
| Heraeus Materials Technology Shanghai Ltd. | Downstream | Shanghai; People’s Republic of China |
| Heraeus Zhaoyuan Changshu Electronic Materials Co., Ltd. | Downstream | Changshu; People’s Republic of China |

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| Heraeus Zhaoyuan Precious Metal Materials Co. Ltd. | Downstream | Zhaoyuan; People's Republic of China |
| Heraeus Romania S.r.l. (RO) | Downstream | Chisoda; Romania |
| Heraeus Tokmak A.S. | Downstream | Izmir; Turkey |
| Heraeus Oriental HiTec Co., Ltd. | Downstream | Incheon; South Korea |

Hanau, March 16 2018

i.V. Dr. Juergen Mueller-Schaefer



Note:

Annex on Page 7 is listing the countries of origin of gold (both Mined and Recycled), and amount received from each country, for the assessment period as requested by the LBMA Responsible Gold Guidance V7, updated Sept 1. 2017. This information is communicated to LBMA only and will not be disclosed to the public