



洛陽樂川鉬業集團股份有限公司
China Molybdenum Co., Ltd.*

Stock Code: 3993

2016

Environmental, Social and Governance Report



* For identification purposes only

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1. ABOUT THE REPORT

Principles of reporting

The report is prepared in accordance with the Environmental, Social and Governance (ESG) Reporting Guide published in December 2015 by HKEX and Guideline on Environmental Information Disclosure by Listed Companies released in May 2008 by SSE.

Reporting period

January 1–December 31, 2016

Reporting scope

The report focuses on the activities carried out by China Molybdenum Co. Ltd. ("CMOC") and covers mineral mining, smelting, processing, sales, hotels and other businesses performed by CMOC, which contribute to the overall ESG influence and performance of CMOC. The report does not include the data of companies that are not controlled by CMOC, and does not disclose the data in relation to the overseas niobium and phosphorus businesses acquired in October 2016 and overseas copper and cobalt businesses acquired in November 2016. For convenience of statement and reading, China Molybdenum Co. Ltd. is referred to as "CMOC", "we" or "the Company" in this report.

Data sources

The report authentically reflects the ESG activities carried out by CMOC. The report adopts the information and data in the official documents and statistics reports of CMOC, and the summaries and statistics of affiliated companies.

Disclosures

The report discloses information in compliance with the materiality principle for the preparation of ESG report in ESG Reporting Guide (i.e. "ESG Reporting"). Key stakeholders including business functions and the management participate in the materiality assessment and identification of significant ESG policies in relation to CMOC, so as to ensure disclosures in the ESG report can both include the strategic priorities and reflect the concerns of key stakeholders (shareholders, customers, employees, suppliers and partners, etc.).

Reporting language

Chinese/English

Access to the report

The report can be downloaded from the websites of CMOC (www.chinamoly.com), HKEX (www.hkexnews.hk) or SSE (www.sse.com.cn).

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2. CHAIRMAN'S MESSAGE

2016 is a year of revolution to the Company. In 2013, we acquired Northparkes copper/gold mine in Australia, and in 2016, we acquired Copebras Indústria Ltda in Brazil and Tenke Fungurume in Congo, which makes us an international company. We are the world's leading producer of special metals with top yields in molybdenum, tungsten, cobalt, and niobium, spreading out four continents. We are the world's low-cost medium-sized copper producer as well as Brazil's second largest phosphorus producer.

We wish to build a respected international company. With the company's rapid growth, we implement environmental and social responsibilities in order to realize coordinated development with our community, business, and staff. We integrate environmental, social and governance risk management into our regular management, strengthen communications with stakeholders such as communities, employees, governments, suppliers, non-governmental organizations and even the media, and promote social responsibility work in all way.

First, we have persistently implemented green development strategy and advanced the construction of green mining. Besides having established and implemented an environmental management system that complies with the ISO14001 standard, we have implemented clean production, advocated green office, and realized the increase in resource comprehensive utilization, energy saving and emission reduction. We highly value the protection of geological environment and the rehabilitation of ecosystem of mines, and strive to minimize the impacts on water resource, species, and soil of where we operate in a vision to build green mines realizing harmonious co-existence of man and nature. For example, Northparkes copper/gold mine, our subsidiary in Australia, builds up farms in communities surrounding the mining area and engages in agricultural cropping, thus establishing good relationships with nearby communities.

Second, we have carried out safety production management to ensure employees' safety and occupational health. With the certification of GB/T28001 Occupational Health and Safety Management System, we pay high attention to employees' occupational safety and health. Therefore, we carry out the construction of the Company's safety production standardization, implement Ten Principles of Safety Behaviors, and conduct safety training, physical examination, and emergency exercises for employees, etc. In addition, we learn from the philosophy of "Zero Harm Operations", carried out by Northparkes copper/gold mine, which focuses on the safety of people, equipment, environment and communities, in order to achieve "Zero Harm Operations" which is the top priority in safety management.

In addition, we have established competitive compensation and welfare system, provided comprehensive professional training for employees, and established an employment mechanism that selects outstanding talents through competition for positions under the principle of openness and equality. We have enhanced corporation with customers and suppliers in order to achieve common development. And with the establishment of an improved anti-corruption system, we have created a clean, efficient and harmonious atmosphere in our company. For several consecutive years, we have been awarded Pioneer on Donation and Poverty Relief by Luanchuan County government, Henan, and in 2016, we donated RMB17 million yuan for Luanchuan County. We also actively initiate various volunteer activities to provide assistance to local social organizations and community projects, realizing the vision of establishing good relationships with nearby communities.

In the future, we will keep undertaking the social and environmental responsibilities of the company with a more positive attitude and higher standards, strengthen corporate governance, and obtain the respect of our shareholders, our society and our industry.

What's more, I would like to express my heartfelt thanks to the shareholders, local governments, communities, customers and partners for their continued support. We, at the same time, would like to express our sincere thanks to the members of the board of directors, domestic and overseas management team and all the staff for the success of our company, and warmly welcome the new members of Copebras Indústria Ltda in Brazil and Tenke Fungurume in Congo.

Li Chaochun
Chairman

Beijing, the PRC
27 March 2017

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3. COMMUNICATION AND ENGAGEMENT OF STAKEHOLDERS

As the communication and engagement of stakeholders constitute an important part of CMOC's company management, CMOC takes active measures to drive the improvement of communication mechanism among related parties. Measures including social responsibility reports, annual reports, domestic China and overseas performance roadshows, investor presentations, customer panels and expert workshops provide opportunities for multi-level communication and in-depth understanding of the concerns and needs of related parties, which facilitate the active performance of due responsibilities concerning each related party. These measures enable CMOC to identify and manage risks more systematically and fully improve the ability to realize sustainable development, thereby to achieve its strategic goals.

During the preparation of the report, we visited the related parties of CMOC and received many suggestions based on which the report better responded to the social responsibility issues the related parties are concerned about.

Communication and engagement of stakeholders

Stakeholders	Communication methods	Expectations and needs
Shareholders/ investors	<ul style="list-style-type: none">• Shareholders' meeting• Press release and announcement• Corporate reporting• Release information on the company website• Investor presentations	<ul style="list-style-type: none">• Guarantee the rights and interests of shareholders• Disclose accurate information in a timely manner• Enhance corporate governance• Operate in compliance with laws and regulations• Combat corruption and uphold integrity
Government/ regulatory bodies	<ul style="list-style-type: none">• Compliance reporting• Supervision and inspection• Attend meetings/workshops• Project cooperation• Submit documents properly	<ul style="list-style-type: none">• Laws and compliance regulation• Policy implementation• Internal inspection• Internal supervision• Occupational health and work safety management• Safety examination and hidden danger identification
Employees	<ul style="list-style-type: none">• Labor contracts• Labor union/employees' representative congress• Leisure-time activities• Voluntary activities• Daily communication	<ul style="list-style-type: none">• Equal employment• Competitive compensation system• Democratic management• Development of technical talents• Overall employee training

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Stakeholders	Communication methods	Expectations and needs
Customers	<ul style="list-style-type: none"> • Daily operation/interaction • Customer satisfaction surveys • Regular visits • Product promotion seminars • Key customer panels 	<ul style="list-style-type: none"> • Meet the expectations and needs of customers • Provide quality after-sales service • Focus on improving technologies • Establish thorough quality assurance systems
Suppliers/partners	<ul style="list-style-type: none"> • High-level meetings • Seminars • Bidding sessions • Supplier access and evaluation • On-the-spot investigation • Daily communication 	<ul style="list-style-type: none"> • Supplier access management • Supplier evaluation • Guarantee the rights and interests of suppliers • Cooperation among suppliers
Environment	<ul style="list-style-type: none"> • Environmental inspection • Environmental disclosure reports • Advocate green operation and management 	<ul style="list-style-type: none"> • Establish energy saving and environmental protection management systems • Reduce emission of pollutants • Resource use efficiency • Green mines
Communities/the public	<ul style="list-style-type: none"> • Public welfare activities • Community service • Environmental protection activities 	<ul style="list-style-type: none"> • Actively participate in public welfare activities • Organize donation • Reduce emission of pollutants

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4. ABOUT CMOC

Company name: China Molybdenum Co. Ltd.

Address: North of Yihe, Huamei Shan Road, Chengdong New District, Luanchuan County, Luoyang City, Henan Province, PRC

Businesses: CMOC is primarily engaged in the mining and processing, smelting and deep processing of base metals and rare metals such as molybdenum, tungsten, copper and niobium, and possesses a complete industry chain which integrates upstream and downstream processes including mining, processing, roasting and chemical products. The Company is ranked among the leading copper producers, the top five molybdenum producers and the largest tungsten producers in the world. The Company is also the second largest cobalt and niobium producer worldwide. In addition, the Company owns the fourth largest producing copper mine in Australia and has the second highest production capacity in phosphate fertilizers in Brazil.

The Company has the highest production capacity in ferromolybdenum and molybdenum oxides nationwide. Sandaozhuang Molybdenum & Tungsten Mine, wholly owned and operated by the Company, is one of the largest defined reserves of molybdenum and the second largest defined reserves of tungsten in the world, and has significant competitive advantages in the cost of molybdenum and tungsten production. Shangfanggou ferromolybdenum mine which is owned by Luoyang Fuchuan Mining Co., Ltd. ("Luoyang Fuchuan"), the Company's joint venture, is in close proximity to the Sandaozhuang Molybdenum & Tungsten Mine and has abundant molybdenum reserve of high grade; the molybdenum mine located in East Gobi, Hami, Xinjiang owned by Xinjiang Luomu Mining Co., Ltd. ("Xinjiang Luomu"), a subsidiary of the Company, is the first huge porphyry-type molybdenum mine discovered in Xinjiang. The mine is large in scale, of high grade, shallow in terms of buried depth and easy for open mining.

Copebras Indústria Ltda. which is operated by CMOC Limited, the wholly-owned subsidiary of CMOC, is a well-established operator of phosphate fertilizers and the second largest fertilizer producer with businesses covering the whole phosphate industry chain in Brazil. With the second highest phosphate production capacity in Brazil, Copebras Indústria Ltda. is capable of processing nearly 6 million tons of phosphate every year. The the Chapadão mine of Copebras Indústria Ltda. has phosphate resources of the highest grade in Brazil; the undeveloped Coqueiros deposit is of high grade similar to Chapadão mine; with significant resources potential and superior geographic location, Morro Preto deposit is one of the projects of most potential in Brazil in recent years. Niobras Mineração Ltda. in Brazil which is operated by CMOC Limited, is the second largest niobium producer in the world. After it completed its expansion and realized the designed output in 2016, Niobras Mineração Ltda. mine can achieve much higher annual output of niobium products.

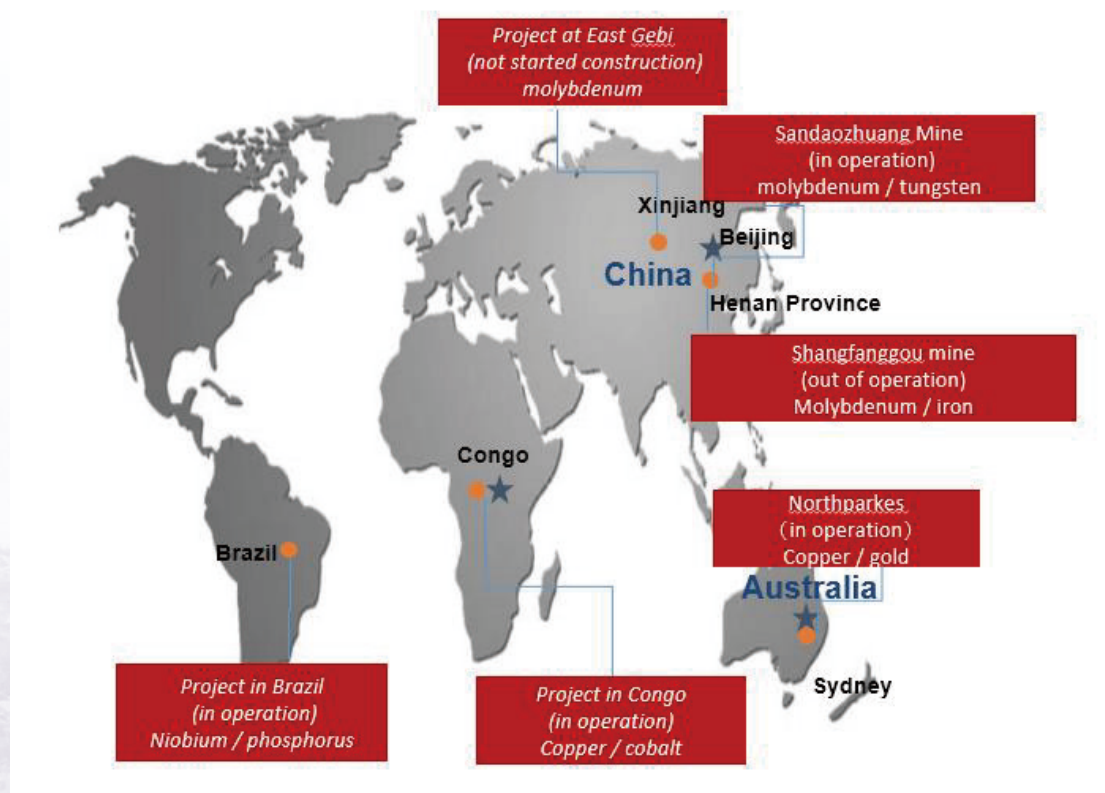
Tenke Fungurume mine which is operated by CMOC Limited, the wholly-owned subsidiary of CMOC is located in Katanga, the Democratic Republic of Congo. It is one of the largest copper and cobalt reserves with the highest grade worldwide. It is also the biggest cobalt monomer producer in the world and the largest foreign-funded enterprise in the Democratic Republic of Congo.

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Northparkes copper/gold mine ("NPM") operated by CMOC Mining Pty Limited ("CMOC Mining"), the wholly-owned subsidiary of CMOC, adopts the advanced and highly-automated block caving method of mining, and has multiple advantages such as high product quality, low production cost and long production period.

The vision of CMOC is to build a well-respected international group corporation. We are committed to strengthen and maintain competitive cost advantage in our existing business, continuously lower the cost, improve management and operational efficiency, and develop internal potentialities. We are persistent in excellent management and optimizing balance sheet, arranging financial structure properly and reducing financial cost. To ensure the steady operation of overseas business as well as firm business synergy, we focus on the structural adjustment and operational methods transformation, actively moving forward to mergers and acquisitions and investing those high-quality projects with better cash flow in stable area to accelerate development with the advantages of company size, industry chain, technology, cash, market management and multiple financing platform.

By December 31, 2016, our main business locates in China, Australia, Brazil and Congo (Kinshasa).



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5. ENVIRONMENTAL PROTECTION

Implementing green development strategy, CMOC strives to optimize its environmental protection system, save energy and reduce emissions, improve its policies on environmental protection, advance the construction of green mining, endeavoring to minimize the impacts of its operation on the environment. As of December 31, 2016, we found no behaviors or circumstances that were not in compliance with environmental laws and regulations.

Environmental-protection management systems

We value environmental protection as our top priority and build a management system in accordance with the local requirements of where we operate, persistently improving our management and performance of environmental protection. We have established and implemented an environmental management system that complies with the ISO14001 standard. We have developed a series of management systems including Environmental Protection Management Systems and Pollution Control Management Systems. We have issued Clean Production Management Regulations in 2016, under which the Company conducts clean production review to fully implement clean production. We have established an emergency preparedness and response mechanism for environmental pollution, developed Contingency Plan for Abrupt Environmental Pollution Accidents, and organized emergency drills. We have conducted environmental awareness promotion events and advocated green and energy-efficient ways of production, living, and consumption, encouraging all staff members to be involved in the work of environmental management.



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Pollutant emission reduction

We are committed to reducing pollutant emissions and minimizing the damage and influence on ecological environment. We have developed a Pollution Control Management Systems and regularly monitored and examined the control of pollution following the Environmental Inspection and Examination Management Procedures to ensure the pollutant emission meets with local environmental protection standard of where we operate. During the construction of infrastructure and production facilities, we have followed “three simultaneous” principle – simultaneous design, simultaneous construction, simultaneous utilization for environmental construction and main production projects, and handles pollution problems via technology introduction and innovation.

Our emission management

Control of sewage discharge	<ul style="list-style-type: none">• Our sewage mainly includes production sewage, sewage from equipment washing and sanitary sewage, etc.• We have invested much production cost for sewage control and recycling to meet the standards for sewage discharge after treatment.
Control of the discharge of waste gas and dust	<ul style="list-style-type: none">• Our waste gas is mainly produced by hot-blast stoves, boilers, and smelting furnaces; and most dust is produced during the process of ore hauling, ore crushing, processing, and smelting.• We alleviate dust through water pouring, and collect, store and recycle dust. Besides, we plant grass on the surface of tailing dams to avoid dust and sand blowing.• We have realized comprehensive use of waste gas through comprehensive control and recycling of waste gas by applying the techniques of “acid production from roasting molybdenum concentrates in rotary kilns in unsteady state producing low-sulfur exhaust gas” and introducing WSA technology developed by the Denmark company TOPSOE, achieving industrialization in the recycling of sulfur dioxide in exhaust, and are the only company in China that outperforms China’s standard in the discharge of waste gas during molybdenum smelting.
Control of noise pollution	<ul style="list-style-type: none">• We primarily make noise when operating motors, air pumps, blowers, ball mills, crushers, belts and vibratory screens.• We control noise by applying noise-abatement equipment, basic vibration reduction methods, vibration-absorptive and sound-proofing rooms and rubber lining.
Control of solid wastes	<ul style="list-style-type: none">• Our solid wastes mainly include ore tailings, slags, construction waste and household waste.• We classify wastes following the National Catalogue of Hazardous Wastes and stores wastes in specific areas.• We give priority to recycling of solid wastes. For example we recycle metals in recyclable smelting slags, comprehensively use low-grade ores, and entrust qualified units to deal with the solid wastes that cannot be recycled.

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Our emission management

Management of radioactive sources

- We have Regulations on the Management of Radioactive Sources and Accounts for Radioactive Sources. In addition, we have specific personnel responsible for the inspection of radioactive sources and completing Radioactive Sources Inspection Record, and strict application and approval process in place for the purchase and scrapping of radioactive sources.
- We equip all facilities and sites which contain radioactive sources with devices for dose monitoring and alarming, and ensure that all radiation protection facilities are in good condition and devices containing radioactive sources perform well.

Case – Northparkes copper/gold mine in Australia harnesses sand blowing in Tailings Storage Facilities (TSFs) by planting barley

The Northparkes copper/gold mine of our subsidiary in Australia applied its successful experience and related supporting facilities in agriculture on the harness of sand blowing in TSFs, and tried to plant barley on the surface of its TSFs in 2015, and, after the barley planted all survived, expanded the planting scale to 130 acres in 2016. This project was nominated for the Environment Excellence Award by the NSW Mining Health, Safety, Environment & Community Conference in 2016, and was invited to share its successful experience at a number of industry conferences. Now the Australian subsidiary continues to try planting other crops including clover and saltbush to find the most appropriate one that grow on the soil environment of its TSFs.



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Resource use efficiency

Energy management

We have formulated Energy Management Procedures, developed energy saving target, conducted energy statistics and analysis, and evaluated the use of energy. We have implemented precise management over the use of resources by approaches of control at sources and whole-process monitoring to ensure that the management of energy consumption proceeds orderly in line with the annual energy saving plan. We have taken measures such as replacement of raw and auxiliary materials, improvement of techniques, repair and updating of equipment, optimization and control of process and recycling of wastes to reduce the use of resources, which have not only helped to reduce operating costs and boost efficiency but also created desirable environmental benefits.

Resources we consume mainly include electricity, water, and fuels such as coal, gas, and oil, etc.

Use of electricity

Establish an "energy management platform", based on which we can realize electricity use during "off-peak hours" via remote control; learn about electricity consumption and quality of electricity consumption on a real-time basis; and equip key facilities with gauges to assess the energy management.

Use of water

Significantly save water for production and domestic use through altering valves for water injection and water supply, and valves of water storage tanks in the boiler room.

Use of coal and oil

Set uniform standards for the management of fuels such as coal, gas and oil; equipped with measuring instrument; establish accounts for purchase, flow and inventory; set energy consumption quotas for key facilities and processes, and conduct quota management.

Green office

We advocate green office and has developed green office regulations and manuals and adopted a number of measures to promote green office.

Case

- We have developed and promoted office systems and energy-saving measures in daily life: LED lights or voice activated lights are gradually used in restrooms, corridors and halls under the condition that the normal lighting requirements are satisfied in these sites; employees should turn off their computers and monitors, and air conditioners before they go off work or if they will be absent from the office for over two hours; indoor temperature should be maintained during 17–28°C, with higher temperature in summer and lower temperature in winter as change of indoor temperature has a significant influence on the energy consumption of air conditioning system.
- We have formulated detailed instructions on the proper operation of each facility, including the requirements on operation, maintenance, storage and handing over of equipment. Equipment will enjoy longer service life and the Company will suffer less resources loss if employees operate equipment properly while effectively avoiding problems such as equipment idling and equipment operating in bad condition, and misuse of devices.
- We have established thorough systems concerning the purchase, equipping and distribution of office supplies and giving priority to purchase energy-saving products. Meanwhile, we have made use of network resources to apply intelligent office systems and realize paperless office and advocated using both sides of paper and recycling portfolios and photocopy paper.
- Lee Royal Hotel Mudu, one of our affiliates, encourages guests to reuse cotton fabrics in the room with tip cards that remind guests to cause less sheet and towel cleaning. Cotton fabrics in the hotel are provided following the principle of "one set for one guest" instead of "one set for one day" under the condition that cotton fabrics in the rooms are sanitary can satisfy the requirements of guests, so as to reduce cotton fabric cleaning. Cotton fabrics like facial towels in the bathroom are of different designs or colors so that guests can easily distinguish the cotton fabrics rather than requiring change of fabrics as the guests cannot tell them apart.

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Comprehensive recycling

We are employing advanced techniques for waste recycling and use of energy-consuming circulating water to realize value added services for the Company through efficiency improvement, energy saving, emission reduction and energy cost cut.

Example – Use of waste heat

- Our affiliated Metal Materials Co. Ltd reuses waste heat produced by air compressors is used to heat circulating water which is enough to support water use in bathhouses for employees except in winter. Such method helps reduce energy (electricity and natural gas) consumption.

Example – Hydroelectric power

- Our subsidiary the 3rd Dressing Company uses tailings backwater for hydroelectric power, through which the company produced 848,398kwh of electricity from October 19, 2015 to December 31, 2016, bringing about benefit of RMB509,038.80.

Example – Recovery of scheelite

- We work with the National Research Institute of Nonferrous Metals of Russia to develop the techniques of "flotation of low-grade scheelite concentrates after rough flotation at normal temperature and reagent removal by heating" which brings about low energy consumption and high recovery rate. With the support of such techniques, we have established three scheelite recovery plants where comprehensive scheelite recycling from flotation of tailings of molybdenum is realized, and has achieved the goal of comprehensive use of resources, energy saving and environmental improvement.

Example – Metallic rhenium recycling

- We cooperate with Zhengzhou Institute of Multipurpose Utilization of Mineral Resources under Chinese Academy of Geological Sciences on the project of "research on the recycling and application of rhenium in the exhaust gas produced from roasting molybdenum concentrates", based on which we have realized comprehensive use of scarce metallic rhenium resources. Such action is of significant interest to the Company, for the Company has improved comprehensive utilization ratio in this way, generating more economic benefits and effectively controlling environmental pollution such as waste gas pollution.

Example – Metallic copper recycling

- The content of chalcopyrite in our beneficiated tailings is about 0.4%. Through testing in the lab, we have optimized our flotation machine and medicament system, and, after reagent removal by thickener on the beneficiated tailings, used copper sulfate as the activator and butyl xanthate as the collector and, through a flotation process, recovered copper at a recovery rate of around 80%, with the grade of copper concentrate above 18%. As of the end of 2016, CMOC 1st, 2nd, and 3rd dressing companies, and Sanqiang Molybdenum & Tungsten Co., Ltd. all realized comprehensive recovery of copper resources, thus improving economic and social benefits of the company.

Green mines

We highly value the protection of geological environment and the rehabilitation of ecosystem of mines, strive to minimize the impacts on water resource, species, and soil of where we operate, and protect the living environment of plants and animals to maintain biodiversity, in a vision to build green mines realizing harmonious co-existence of man and nature. In order to achieve the important objectives of building green mines, we have taken many actions including specifying requirements on the leadership, clear responsibilities, scientific management, sufficient fund, strengthening assessment and long-term mechanism. We have engaged professional organizations in on-site investigation and discussion, combined comprehensive management and management of key areas, and short-term management and long-term management, and afforested possible areas.

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Case – Our ecosystem rehabilitation in Sandaozhuang Molybdenum & Tungsten Mine

Our Sandaozhuang Molybdenum & Tungsten Mine is a mega molybdenum and tungsten ore deposit of shallow depth, high grade, and good beneficiation. Disturbances of opencast mining of such ore deposit to topography are mainly in open pits, slag fields, and mining industrial sites.

- Rehabilitation of open pits

Open pits have formed up 24 benches, but only a few of them are stabilized. The principle of rehabilitating stabilized benches is to rehabilitate once stabilized. Rehabilitation measures are: earth up the platform of stabilized bench and sow grass seeds to restore vegetation, and plant creepers at the foot of inner slope of the bench platform to afforest such slopes, in order to improve ecological environment at mining areas.

- Rehabilitation of slag fields

Rehabilitation measures on slag fields mainly include building of rock dams (all permeable dams), construction of stabilizing platforms and thorough water interception and drainage system, leveling and earthing up, restoration of vegetation, etc., through which the slag fields are fully rehabilitated and afforested to ensure stability and safety of such fields and preserve soil and water.

- Rehabilitation of mining Industrial sites

In order to give employees a good living and working environment, we have paid a great deal of attention to the rehabilitation of office and living areas, and industrial sites including explosive store, oil store, and transformer station, etc. Measures taken mainly include afforesting, stiffening, and lighting these areas in a timely manner.

Till now, we have rehabilitated 4 slag fields, with 1 being rehabilitated, and afforestation in an aggregated area of 1.43 million square meters has been restored, covering more than 85% of areas that can be afforested in the mine premise, and 100% in the plant site.



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Case – Farms surrounding mining areas of Northparkes copper/gold mine in Australia

Northparkes copper/gold mine, our subsidiary in Australia, builds up farms in communities surrounding the mining area and engages in agricultural cropping, thus improving operation efficiency while establishing good relationships with nearby communities. In 2016, crop planting areas in Northparkes copper/gold mine reached 3,640 hectares in total.



We have achieved the expected targets based on its efforts in environmental protection and land reclamation, and have won multiple honors and awards.

Awards and achievements of CMO



Awarded for “Outstanding Contribution to Geological Disaster Mass Observation and Prevention” by the Ministry of Land and Resources

Recognized as “Demonstrative Base for Comprehensive Utilization of Molybdenum, Tungsten, and Iron Resources” by the General Office of Ministry of Land and Resources of China and the General Office of Ministry of Finance

Recognized as “Outstanding Organization in Water and Soil Conservation” by the Ministry of Water Resources

Recognized as the “Demonstrative Base of Ecological Prosperity in China” by Committee of Ecological Prosperity Forum of China

Ranked among the “First Batch of Outstanding Enterprises in Reasonable Development and Utilization of Mineral Resources in China”

Recognized as “Outstanding Organization in Afforestation in Henan Province” by Henan Provincial Department of Forestry

Sandaozhuang Molybdenum & Tungsten Mine of CMO identified as “National Pilot Organization of Green Mines” by the Ministry of Land and Resources

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6. GUARANTEE OF RIGHTS AND INTERESTS

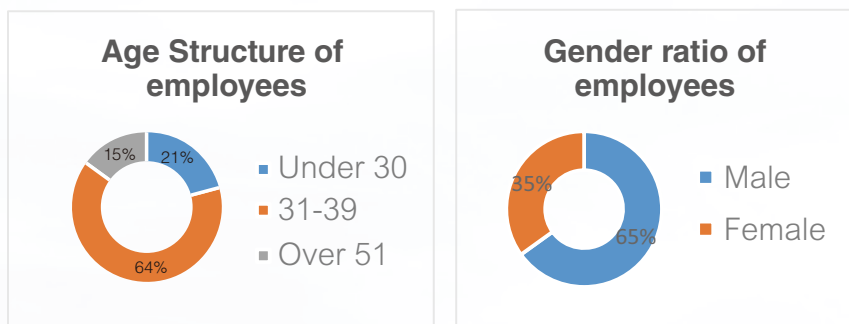
Insisting on people-oriented principle to regard employees as the most valuable resources in the future, we strictly comply with the requirements of relevant labor policies and regulations of operating locations to guarantee employees' rights and interests, creating an environment where people show respect for knowledge and talents and establishing an employment mechanism that selects outstanding talents through competition for positions under the principle of openness and equality.

Equal employment

Fair employment

We recruit employees with both integrity and competence under the principle of openness, fairness, and impartiality through approaches such as open recruitment and competition for positions.

As of December 31, 2016, we have in China 6,002 employees in total including 2,096 female employees.



Note: Excluding Copebras Indústria Ltda in Brazil, Tenke Fungurume in Congo and Northparkes copper/gold mine in Australia.

We build internal and external recruitment platforms via campus, Internet, society, and our information system to facilitate the systematization and standardization of recruitment.

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Case – Our open recruitment mechanism

In order to establish a dynamic employment mechanism under which each executive should be ready to assume a higher or lower position and each employee can give full play to his advantages in the right position, our headquarters launched open recruitment for 217 positions in 2016.

集团开展各分子公司科级职位公开竞聘工作

为不断增强干部队伍活力,同时拓宽用人选拔渠道,增强员工竞争意识,集团公司决定,各分子公司科级职位在本单位范围内公开竞聘。

此次竞聘的基本条件和资格为:1、年龄在45周岁(1971年8月1日以后出生)以下;

2、具有国家承认大专(含)以上学历;

3、在集团公司连续工作5年以上;研究生以上学历连续工作3年以上;

4、现在任科长参加本岗位竞聘的不受以上条件限制;

5、有下列情形之一的不得参与本次竞聘:

(1)受过各类处分尚在影响使用期内的;

(2)正在受纪检、监察部门立案审查的;

(3)有其它影响使用的规定情节的。

各分子公司可根据实际工作需要,制定本单位各科级职位任职资格和其他竞聘条件。

此次竞聘的时间要求为:

2016年8月15日前制定本单位竞聘实施方案;2016年9月30前,各分子公司公开竞聘工作全部结束。

(人力资源部)

Open recruitment – the platform of the
“Journal of China Molybdenum Co., Ltd.”

分子公司科级职位竞聘笔试工作顺利完成

2016-09-06 浩铝集团



Scan QR Code via WeChat to follow Official Account

9月2日,在集团公司统一组织和严密安排下,顺利完成了分子公司科级职位笔试环节。

本次笔试分选矿二公司、选矿三公司、冶炼公司和洛阳金属材料公司四个考点,由人力资源部 and 纪检监察部根据参考人数、现场条件等因素最终确定。本次笔试于9月2日下午两点整全部考点同时开始,四点二十分全部考点同时结束。由集团公司抽调专门人员进行监考和巡考,充分保证考试的公平、公正。笔试结束后,组织阅卷,于9月3日结束全部阅卷和评分工作。集团公司纪检监察部深度参与并监督了整个阅卷过程,保证了阅卷工作的公正性和公平性。

目前,正在公示笔试成绩。公示结束后,将进行竞聘演讲答辩。

又讯:

9月1日,集团公司财务系统科级职位公开竞聘工作也在公司范围内全面展开,共有财务管理部业务主管和分子公司财务科长等19个职位。

通讯员:人力资源部 李松
财务管理部 魏延兵

Open recruitment – the platform of
WeChat official account

Employment in compliance with laws and regulations

We prohibit forced labor and ensure that employees sign employment contracts with the Company voluntarily. As stipulated by the “Labor and Personnel Management System of China Molybdenum Co., Ltd.”, the Company should sign non-fixed-term or fixed-term labor contracts with employees based on specific conditions in compliance with the principle of equality and voluntariness. We sign labor contracts with all employees and ensure that they will not suffer from discrimination due to race, nationality, skin color, religion, physical disability, gender, association membership, or marital status, etc.

We forbid child labor and forced labor, and do not allow underage workers to do any forbidden work. All employees should be over the legal working age. As required by the “Labor and Personnel Management System of China Molybdenum Co., Ltd.”, the Company should not recruit juveniles under the age of 16. Human Resources Department will require applicants to offer valid identity documents and carry out background investigations appropriately based on the documents provided.

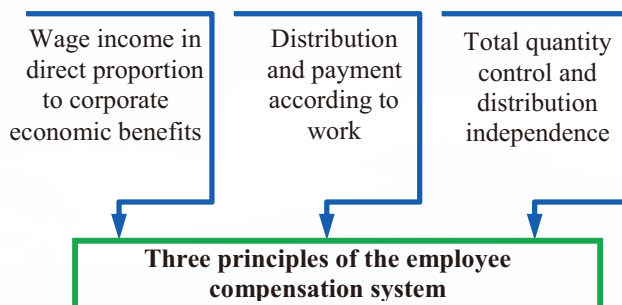
We did not identify any issues concerning the violation of laws and regulations that prevent child labor or forced labor within the Company in 2016.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

COMPENSATION AND BENEFITS

Compensation system

We adopt standard, normative, and professional methods to conduct classification, summarization and statistical analysis on job positions of our company and the market, and produce survey reports which objectively reflect the compensation status of our company and the market. Moreover, we establish a sound and stimulating compensation system that is able to attract and retain core employees. The compensation system is not only fair and reasonable internally, constantly improving employees' human resource capability, but also competitive externally, complying with the laws and regulations of operation locations. We follow three principles when establishing the employee compensation system:



We establish and improve the incentive and restrictive mechanism for human resources, and set up a scientific performance evaluation indicator system to conduct strict assessment and evaluation on employees, based on which we can determine employees' compensation, position adjustments, and dissolution of labor contracts to ensure the workforce in a state of continuous optimization.





Employee benefits

Welfare and care

We establish a guaranteed and competitive welfare system to provide mandated benefits and other caring benefits for employees. For domestic employees, we provide basic social insurance, basic housing fund, and various statutory holidays, offer labor protection appliances, send out holiday gifts or organize relevant activities at important festivals, and set up medical consultation rooms, etc.

Case

Attaching great importance to employees' physical health, we team up with Luoyang Central Hospital Affiliated to Zhengzhou University to set up a medical consultation room, which is the first one jointly established by Luoyang Central Hospital and an enterprise, and also the first one established within an enterprise by a Grade A Class 3 hospital. Meanwhile, our headquarters conducts training courses on first aid knowledge, equips frontline units with first aid kits, and regularly carries out physical examination for employees.

 Experts from different departments provide medical services for employees and their family members in the medical consultation room every Friday Consultation Day on Friday	Physical examination month in June and July Labor union of our a headquarters organized comprehensive physical examination for employees in June and July of 2016 	 Cooperate with Luoyang Central Hospital to conduct 10 health knowledge lectures Health knowledge lecture	First aid kit for frontline units Equip grassroots units with first aid kits to ensure that frontline production workers can receive first-time treatment when getting injured accidentally 
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ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Northparkes copper/gold mine, our subsidiary in Australia, provides competitive benefits and compensation for employees based on the requirements of local labor and compensation policies.

Case – Northparkes copper/gold mine conducted the wellness program of “Heart at Work”

The morbidity and mortality of cardiovascular disease present a gradual upward trend around the world, and this disease kills thousands of Australians per year. CMOC Northparkes copper/gold mine has conducted the wellness program of “Heart at Work” since 2015 in order to help employees to combat cardiovascular disease. The wellness program encourages and helps employees to follow a healthy diet, keep exercising, maintain ideal weight, reduce the frequency of drinking and smoking, relieve working and living pressure, and stay cheerful. The wellness program of “Heart at Work” won the Health Excellence award at the 2016 NSW Mining Health, Safety, Environment and Community Conference, indicating that our philosophy of “Zero Harm Operations” has been widely acknowledged.



Recreational and sports activities

We are committed to create a healthy and comfortable working and living environment for employees in order to relieve their working pressure, help them balance work and life, strengthen their sense of belonging, and actively foster a happy, open, healthy, friendly, and harmonious working and living atmosphere. Therefore, we conduct yoga training courses and Tai Chi training courses, as well as organize staff sports meetings and recreational activities, such as basketball matches, tug-of-war contests, table tennis matches, chess matches, etc.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



Yoga classes every Monday, Tuesday and Thursday



Tai Chi classes every Monday, Tuesday, Wednesday, Thursday, and Friday



"October 1" staff sports meeting for body building

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Case – Northparkes copper/gold mine conducted the wellness program of “Am I Fit for Work?”

In order to help employees balance work and life, CMOC Northparkes copper/gold mine conducted a series of activities, including the wellness program of “Am I Fit for Work?” designed to address issues that may affect work, including physical and mental health, drug abuse and excessive drinking, working fatigue, etc.



Democratic management

We develop the CMOC's Suggestions on the Implementation of the System of Disclosing Corporate Affairs to implement the system of disclosing corporate affairs, and achieve the standardization and institutionalization of disclosure contents and disclosure methods. The workers' congress can discuss development planning and annual plan, and review important decisions on and major systems for corporate operation and management. Moreover, it can disclose major operational matters (such as development planning, operation status, annual reports, quarterly reports, etc.) and matters related to employees' vital interests (such as conclusion and performance of contracts, wage consultation on the basis of equality, etc.) in order to strengthen democratic decision-making, management, and supervision, as well as ensure that employees exercise their democratic rights.

We promote employee participation and listen to their opinions via multiple channels such as regular department or project meeting, business seminar, report, survey, training, interview, written communication, etc. Meanwhile, we inform employees of corporate development status through bulletin board, OA system, and the Journal of China Molybdenum Co., Ltd. In March 2016, we officially set up a WeChat official account to push messages for employees about industry policies, management innovation, safety production, typical cases, incorruption education, health care, etc.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

7. CAREER DEVELOPMENT AND TRAINING

Based on the training concept of “improving quality through training, and promoting development with quality”, we build a career development platform for common development of employees and the Company, and provide comprehensive professional training for employees.

Comprehensive employee training

With the integration of unified planning, centralized management, and decentralized management for employee training, we constantly improve employees' knowledge level and working initiative, as well as inspire their sense of pride and achievement based on their self-learning methods. Moreover, we always develop training programs based on employees' opinions and suggestions, which can not only solve practical problems in production and operation, but also improve the scientificity, planning, and budget controllability in the development of training programs, as well as enhance the conversion rate and the effect of training programs.

Case – Training for domestic employees

As of December 31, 2016, more than 12,000 person-time have participated in 145 training programs organized by our headquarters, intermediary training institutions, social functional departments, and grassroots units, including safety qualification training for middle management, safety production management personnel, and engineering technology professionals, ten principles for employee safety, integrated quality management system training, academic educational training, employee skill training, equipment maintenance and lubrication training, new employee orientation training, training on human resources and archives management, etc.

- We cooperated with Xi'an University of Architecture and Technology to set up a college certificate program, where 140 people participated in the training courses with 120 class hours per capita, and completed the graduation oral examination in 2016.
- We selected 25 equipment maintenance workers to participate in the off-job training on new equipment and new technologies in the University of CITIC Heavy Industries, helping them to reach the level of senior workers and obtain the higher-level vocational qualification certificate. At present, 25 maintenance workers have completed training in the University of CITIC Heavy Industries and went back to their positions.
- We organized the training on securities laws and regulations for the Board Office, with the participation of 230 person-time and all passed the examination.
- We conducted knowledge training on contract, bill business, and foreign exchange for employees of Molybdenum and Tungsten Trade Company Limited of China Molybdenum Co., Ltd., with the participants of more than 400 person-time.
- Lee Royal Hotel Mudu, one of our affiliated companies, organized the management to deliver lessons for 11 sessions of Mudu University Hall and conducted 35 sessions of Mudu University Hall in 2016, with the participants of 3,377 person-time.



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Case – Northparkes copper/gold mine actively conducted employee training

- CMOC Northparkes copper/gold mine conducted a new training program for the management in 2016, aiming to comprehensively improve the EQ, leadership, and management capability of the management.
- Northparkes copper/gold mine attached great importance to employee training in order to improve the occupational level of employees. In 2016, the employees of Northparkes copper/gold mine received training of approximately 3,300 hours.

In May 2016, CMOC Northparkes copper/gold mine attended the NSW Mining Health, Safety, Environment and Community Conference at Sydney, and had finalists in three award categories: Northparkes copper/gold mine – Mining Operation of the Year, Esther Bruce – Outstanding NSW Tradeswomen, and Stacie Martin – Exceptional Young Woman in NSW Mining.



Technology talent building

We advocate improving the skill level of technology professionals, foster technology innovation, and encourage technology professionals to obtain professional titles, thus gradually establishing and improving the independent, scientific, and reasonable professional title evaluation and personnel recruitment system in 2016.

- 1) We establish the technology professional employment system in order to fully motivate employees' initiative for technology learning and quality improvement, play the guiding role of professional title management system, and recruit employees with professional technical titles based on the principle of working experience in conformity with professional technical posts. We have achieved the recruitment objective for technology professionals this year.
- 2) We develop and follow the "Technical Grade Evaluation Management Measures for Engineering Technicians of China Molybdenum Co., Ltd.", aiming to conduct technical grade evaluation on corporate employees who are engaged in technical work in professional areas of mining, mineral dressing, geology, measurement, smelting, machinery and equipment management, and electricity, and have obtained corresponding professional technical titles.

Case – Employee skill contest

In order to cultivate the study-oriented, knowledge-oriented, skill-oriented, and innovation-oriented workforce, we strived to build the platform for employees to learn technologies, exchange experience, learn from each other, enhance skills, and achieve common progress, as well as conducted professional skill contests involved with 9 types of workers (including ball mill workers, flotation workers, belt men, and chemical workers of mineral dressing system, roller drill workers and excavator operators of mining system, crane man, and furnace men of smelting system), which received strong reaction and support from employees, and helped to create a good atmosphere of comparing, learning, chasing, helping, and surpassing.



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

8. HEALTH AND SAFETY

Occupational health and safety production management

With the certification of GB/T28001 Occupational Health and Safety Management System, we pay high attention to employees' occupational safety and health. Therefore, we carry out the construction of the Company's safety production standardization, and conduct safety training, physical examination, and emergency exercises for employees, etc., in order to achieve effective management on employees' health and safety, and prevent against personal safety accidents and occupational hazard accidents.

In order to strengthen occupational health management, standardize occupational health training, prevent, control and eliminate occupational hazards, and ensure employees' safety and occupational health, we develop the CMOC's Occupational Health Management System, Liability System for Prevention and Control of Occupational Hazards, Occupational Hazard Notification System and Occupational Hazard Reporting System and other systems. We also set up a leading group for occupational health management. Meanwhile, with a heavy emphasis on the establishment of safety production system on the basis of safety specifications and standard requirements of the operation locations, we integrate the establishment of safety system into occupational health and safety management system. In addition, we revise several safety operation rules and develop the Safety Production Reward and Punishment Assessment Measures to implement the system of safety risk deposit.

Safety measures we adopted in 2016

- Sign target responsibility documents with the first responsible persons of affiliated units
- Reinforce responsibilities, and improve rules and regulations
- Focus on all-staff safety educational training
- Strengthen safety supervision and inspection, and intensify the efforts to identify and solve potential safety hazards
- Strengthen safety management on the storage and usage of explosives for civil uses and hazardous chemicals
- Carefully examine, monitor and maintain special equipment, pressure vessel, etc.
- Strengthen occupational health and safety management, correctly wear and use labor protection appliances as required, as well as check, monitor and control operating conditions including high temperature, noise, hazardous gas, industrial dust, etc.
- Strengthen emergency management, and regularly conduct emergency exercises
- Implement civil, technical and material precautions for all closed pithead, haulageways and ventilation roadways at the periphery and bottom of Sandaozhuang Molybdenum & Tungsten Mine Area
- Focus on the establishment of safety production liability system, and intensify the efforts to examine and evaluate the liability system

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Establish the organizational network of safety production management

We constantly strengthen the leadership building in safety production, improve the institution and personnel in safety management, and establish a safety management functional department to exercise unified leadership over safety production. The management performs their respective responsibilities for safety production within distributed scope based on safety production liability system. We analyze and report safety production status on a regular basis, and promptly eliminate hidden dangers of safety management.

In 2016, our headquarters newly established Safety Supervision Division with full-time safety management personnel newly assigned for our branches and subsidiaries and assumed main responsibilities of management personnel at different levels to supervise the work and hidden dangers of safety production sites, and establish effective supervision mechanism and reward-punishment mechanisms.

“Zero Harm Operations” – top priority in safety management

Since 2012 our Australia-based subsidiary Northparkes copper/gold mine has carried out the philosophy of “Zero Harm Operations” which focuses on the safety of people, equipment, environment and communities. Northparkes copper/gold mine develops a systematic and integrated safety management system to strengthen employees’ safety awareness through cycle training, and conducts safety evaluation on every equipment, processing point and specific work to develop systematic and standard documents. Professional safety management personnel with safety qualifications are responsible for routine safety management, and they constantly look for potential safety hazards in production area and working area. Additionally, Northparkes copper/gold mine improves management level constantly under the guidance of external professional safety institutions.

In addition, we summarize Northparkes copper/gold mine’ philosophies, methods and measures in safety management, and communicate the philosophy of “Zero Harm Operations” to all employees via multiple channels such as WeChat, “Journal of China Molybdenum Co., Ltd.”, bulletin boards, and meetings, in order to achieve “Zero Harm Operations” which is the top priority in safety management.

“Zero Harm Operations” – The soul of safety production in Australia’s Northparkes copper/gold mine



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Safety awareness improvement

As we actively conduct safety education activities, we carried out "Safety Production Month" activities in June 2016 themed by "strengthening the awareness of safety development, and improving the safety quality of all employees". Our subordinate units issued corresponding activity plans successively to strengthen safety propaganda & education and safety culture construction, create a social atmosphere of caring for life and focusing on safety, and promote the implementation of work assignments related to "safety production".



Safety inspection and hidden danger identification

We irregularly conduct safety inspection on workplaces, office area, and living quarters to eliminate hidden dangers and prevent against accidents. Meanwhile, we entrust external professional institutions to carry out inspection of dust and noise on the Company's hazardous workplaces.

In 2016, we continued to conduct hidden danger identification and governance, integrated the activity of Safety Production Month with routine safety management, constantly strengthened the identification and governance of hidden dangers in safety production, and carried out hidden danger identification and governance for the Company regularly or irregularly. We strictly conducted deadline rectification to achieve 100% close-loop management.



Carry out 111 times of spot supervision on the production and operation of constituent companies, and issue the rectification notice on hidden dangers checked out

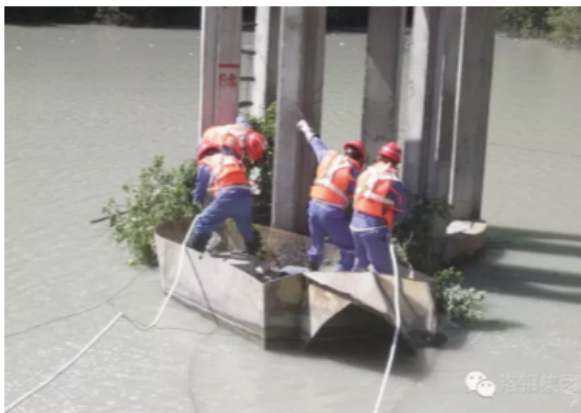
Carry out special inspection on noxious gas, high- and low-voltage electricity, and issue the rectification notice on hidden dangers checked out

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Safety emergency rescue management

In order to prevent and control potential accidents or make preparations for and responses to emergencies to reduce potential impacts to the largest extent, we establish the safety standardization as well as occupational health and safety management system. Meanwhile, the constituent companies in domestic China develop the Emergency Management System based on their actual conditions to constantly improve the emergency capacity building.

We organize emergency exercises against major hazard sources, such as the gob evacuation exercise of the branch Mine Company, vitriol leakage exercise of the subordinate smelting plant, liquid ammonia leakage exercise of the subsidiary Tungsten Company Co., Ltd., etc., which significantly improve the safety emergency rescue capability of the whole system.



Time is life, and danger is order.

In July 2016, according to People's Government of Luoyang City, Heinan Province, the Company invested RMB260,000 to organize a special emergency evacuation exercise downstream the tailings impoundment of Jiuyang Mining Co., Ltd., attracting representatives of all districts and counties of Luoyang City to observe and study.

Northparkes copper/gold mine, our Australia subsidiary, focuses on safety emergency rescue management and sets up an excellent emergency rescue team. This team was outstanding against the Victorian Mine Rescue Competition, a national emergency rescue completion in Australia, winning the first place in several items, including rope rescue, theory, fire-fighting, team captain and, most importantly, team safety.

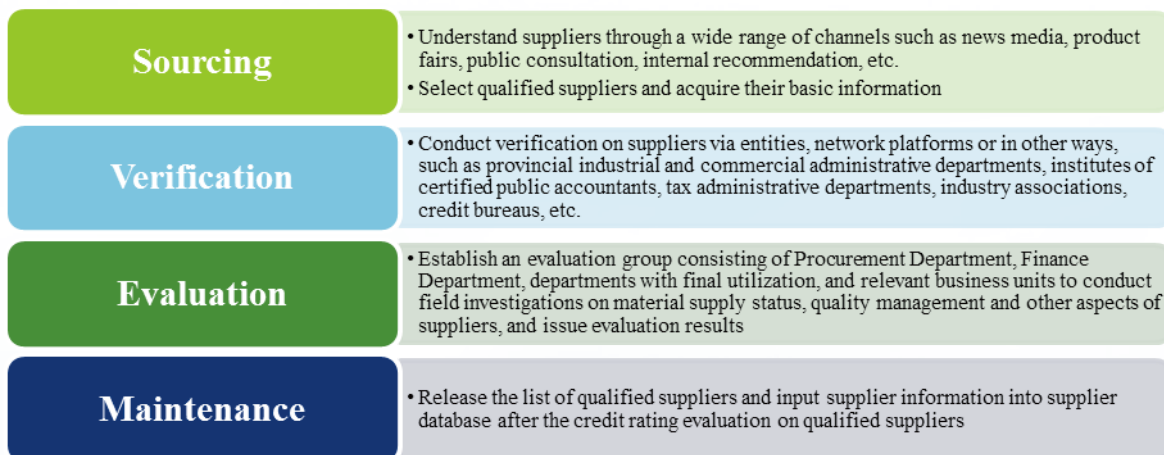
9. GREEN SUPPLY CHAIN

Based on the operation philosophy and corporate value of integrity and win-win, we conduct cooperation and share best practices in sustainability with suppliers to make contributions to the sustainable development of industry chains, as well as achieve common development and establish a safe and reliable green supply chain with partners.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Supplier access management

We carry out the “Supplier Access Management Measures” to ensure that qualified suppliers possess good business reputation and technical expertise, as well as comply with policies and regulations on health & safety and environmental protection. Supplier access is performed in strict accordance with prescribed procedures.



Supplier evaluation

In the course of routine management, we develop the “Qualified Supplier Evaluation Management Measures”, based on which CMOC implements supplier evaluation system for qualified suppliers gaining access in order to urge them to ensure product quality and safety, and constantly improve supply chain management level.

In the course of cooperation, we establish communication mechanisms such as regular visit, field study, and field services, and handling mechanisms such as quality objection handling and field services, as well as sign honesty and integrity agreements with suppliers to promote the standardized operation and benign development of the industry, and create a satisfying benefit pattern.

On a monthly basis, relevant functions are responsible for summarizing contract compliance status of the month in the “Report on Procurement Contract Compliance Results”, and evaluate price, quality, delivery date, contract compliance status, and after-sales services in the course of contract performance of the month.

On a yearly basis, supplier evaluation group assesses suppliers based on the “Report on Procurement Contract Compliance Results” submitted each month and relevant transaction information. According to the annual evaluation results, it will maintain the credit rating for suppliers rated as “satisfied”, inform those rated as “somewhat satisfied” to make rectifications, and disqualify those rated as “disqualified” to ensure procurement quality.

Protection of supplier rights and interests

In strict accordance with the “Procurement Business Management Measures” and the “Bidding Business Management Measures”, we pay attention to defending suppliers’ product benefits, fully respecting and safeguarding their legal rights and interests, and protecting their business secrets. Moreover, CMOC actively implements sunshine purchase in order to create an open, fair, and just procurement and competition environment, as well as prevent against corruption cases such as commercial bribery, black case work, etc.

We develop the “Supplier Query and Complaint Management Measures”, based on which, suppliers can raise queries to us via multiple channels such as complaint hotline and fax, if they think that procurement documents, procurement processes, successful bidding and transaction results impair their legal rights and interests. In such circumstance, we will appoint a person to handle and reply to queries from suppliers so as to protect the rights and interests of suppliers.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Cooperation with suppliers

Contemporary enterprises compete in not only technology, cost and management, but also industrial chain. We actively look for excellent local suppliers to significantly lower procurement costs, positively promote local economic development and create local employment opportunities, as well as reduce transport energy consumption, carbon emissions, and impacts on environment.

10. PRODUCT LIABILITY

Customer management system

Focus on customer demands, and satisfy customer expectations

We develop the Customer Management Measures of China Molybdenum Sales Co., Ltd. (Interim) based on the philosophy of "customer first". Through market research, questionnaire survey, customer interview and feedback, and other methods, we explore and analyze the demands, expectations and preferences of key customers to build complete customer profiles, as well as bring forward pertinent measures to satisfy customers' differentiated demands, improve customer satisfaction degree, and better promote our products. We improve supply support capability for key strategic customers signing long-term supply agreements, establish and optimize the service system for strategic customers. Meanwhile, we strengthen coordination over relevant service processes such as planning and delivery to improve the level of delivery services and satisfy customers' demands for quantity, variety, and time as contractually agreed. In addition, we establish the sales return management process to clarify the operation process of each service node for improving the working standards of each service node.

Conduct customer satisfaction surveys to timely collect feedback and suggestions

With a strong emphasis on customer callback, we insist on making records of routine callback, ordinary and year-end interviews, and carry out customer satisfaction surveys every year. Corresponding business personnel are responsible for analyzing and summarizing the problems raised in customer satisfaction surveys, and proposing improvements and measures. Meanwhile, we establish the customer complaint mechanism, where relevant personnel will carefully record customer complaints, conduct analysis, and timely come up with solutions, in order to actively respond to customer demands.

In 2016, we were rated/awarded

- Best Supplier of the Year by Zhenshi Holding Group Co., Ltd.
- Gold Supplier of the Year by CITIC Pacific Special Steel Group
- A key strategic partner by Tiangong International Co., Ltd.
- Contract First, Credit First Enterprise in 2013 and 2014 By China's State Administration for Industry and Commerce

Concentration on technology enhancement

We develop the Research Project Management Measures in order to strengthen and promote independent innovation, enhance core competitiveness, and realize corporate development strategy. With advanced technologies and strong R&D capability, we transform the R&D of patent technologies into advanced and efficient production facilities and processes for higher product quality.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Protection of research results

We have attached great importance to the protection of research results by taking various measures including advance measures, such as discussing with partners and trustee to clarify the ownership of research results, and requiring confidentiality undertaking to be signed among partners, trustee, and research staff; in-process measures, such as delegating specific person to be in charge of technical materials in the process of project implementation, prohibiting disclosure of research progress, technical routes, and research results without approval of project participants, and regularly examining the implementation of confidentiality measures; and ex-post measures, such as reviewing intellectual property, timely obtaining ownership, and forbidding irrelevant people to gain access to research results, etc.

Research results and awards obtained by us in 2016

Overcoming technical difficulties with concerted efforts

In March 2016, Tungsten Trade Company put APT production line into test run, using the new technique featuring “soda leaching at high pressure – alkaline extraction – rough separation of tungsten and molybdenum through evaporative crystallization – deep removal of molybdenum by ion exchange – evaporative crystallization” jointly developed with Central South University to produce APT, and the new technique featuring “removal of tungsten by extracting from molybdenum-rich crystal liquor – crystallization through acid deposition” to produce ammonium tetramolybdate, thus realizing high quality utilization of tungsten and molybdenum and recycling of phosphorus resources.

Research results in 2016



“An integrated digital mining production management system in open pit mine”, and “technology and industrialization of recycling of low graded scheelite from molybdenum floatation tailings” were nominated for the 4th China Grand Award for Industry.

“Technology and industrialization of recycling of low graded scheelite from molybdenum floatation tailings” was awarded the first prize of 2015 Science and Technology Award of China’s Non-ferrous Metals Industry, and “an integrated digital mining production management system in open pit mine” won the second prize of Award for Scientific and Technological Advancement in 2016 Science and Technology Award of China’s Non-ferrous Metals Industry.

“Application of short flotation columns in molybdenum dressing”, and “development and application of energy saving technology in multi-hearth furnace processing for molybdenum concentrate” won the second prize of Award for Scientific and Technological Advancement of Luoyang.

Participation in formulation of industrial standards (international standards) in 2016



In April 2016, CMOC took part in Annual Conference of National Pig Iron and Iron Alloy Standardization Technical Committee, which summarized what the Committee has achieved in 2015, and discussed work plan for 2016.

In October 2016, CMOC participated in Standard Appraisal Meeting of National Pig Iron and Iron Alloy Standardization Technical Committee, assisting in the review of Measurement of Total Nitrogen Content in Ferro-silicon Nitride, Measurement of Calcium Content in Ferro-silicon Nitride, Measurement of Phosphorus Content in Ferro-silicon Nitride, Measurement of Sulphur Content in Ferro-silicon Nitride, and Measurement of Manganese Content in Ferro-silicon Nitride drafted by Wuhan Iron and Steel Corporation, and Vanadium Pentoxide standards drafted by Pangang Group Vanadium Titanium & Resources Co., Ltd.

In November 2016, CMOC participated in Annual Conference of National Non-ferrous Metals Standardization Technical Committee, which summarized what the Committee has achieved in 2016, and discussed work plan for 2017.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

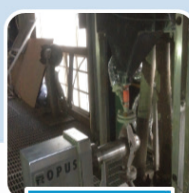
Quality assurance system

Quality management is essential to corporate management as quality is the life of a company, just as a famous saying goes, “for a long-term program, quality comes first”. We believe that quality is not only the foundation of an enterprise's survival and development, but also the key driving force of market expansion, thus we firmly follow the business strategy that highlights benefits of quality. We have formulated Administrative Measures for CMOC's Product Quality (Molybdenum Concentrate, Tungsten Concentrate, Molybdenum Oxide, and Ferromolybdenum), with clarified description of product standards, quality evaluation, internal arbitration on quality objections, and quality assessment, etc. Meanwhile, we have formulated Measures for Quality Assessment of CMOC's Molybdenum Concentrate (Trail) in accordance with Law of the People's Republic of China on Product Quality, Methods for Chemical Analysis of Molybdenum Concentrate (YS/T555) and other laws and regulations, in an attempt to steadily improve the quality of molybdenum concentrate, provide quality materials for downstream smelting companies to ensure a stable smelting process and reduce smelting costs.

- ❖ We have established, implemented and passed ISO9001 quality management system in compliance with international standards
- ❖ In order to improve the quality of molybdenum concentrate products and control impurity contents in the products, we use hand-held fluorescent analyzer, online grade analyzer, and online particle analyzer to test product quality online in a timely manner



Hand-held fluorescent analyzer



Online particle analyzer



Online grade analyzer

Brand construction and maintenance

Brand, representing corporate image with product at the core, guarantees and symbolizes an enterprise's ability to expand markets, maximize benefits and build up good reputation. In order to promote products, expand markets, participate in competition, develop production, we, a world-leading molybdenum manufacturer with three world class molybdenum mines, one of China's largest tungsten manufacturer, and Australia's fourth largest copper manufacturer, have formulated Trademark Management System. It aims to improve our brand eminence and reputation via sensible and effective brand management as well as proper brand strategy.

11. ANTI-CORRUPTION

With the establishment of an improved anti-corruption system, we make great efforts in education and popularization of anti-corruption principle, and vigorously enhances inspection and supervision, thus enabling full coverage inspection with a focus on supervision of sensitive matters. The Company also works tirelessly in investigation of violations of rules and regulations, actively explores and improves accountability system, and vigorously strengthens the management of discipline inspection and supervision team, in order to firmly stick to the morality of combating corruption while advocating integrity for the establishment of a long-term anti-corruption mechanism.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

As of December 31, 2016, we have complied with the relevant laws and regulations about anti-corruption and anti-money laundering, and we had reported no cases of corruption, bribery, blackmail, fraud or money-laundering, nor any lawsuit arising from the above mentioned matters.

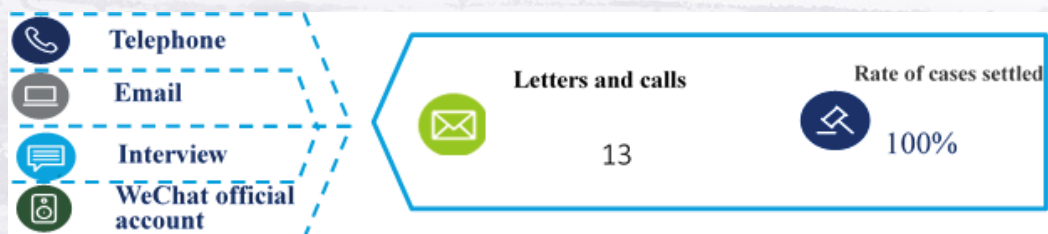
Popularization of integrity and self-discipline

Popularization of integrity and self-discipline initiated by us in 2016

Educational activities on “Observance of Discipline and Rules”	We provided instructions through what happened around, guiding employees to observe discipline, obey rules, learn from the past and build self-discipline. We encouraged everyone to strictly follow rules in various practices, voluntarily resist any form of temptations and protect the reputation and interests of the Company.
Educational activities themed “studies on the theoretical and practical issues of party building”	We organized educational activities themed “studies on the theoretical and practical issues of party building”, distributed learning materials and question bank to employees, held knowledge quiz among employees, comprehensively raising employees’ awareness of anti-corruption.
Specialized remediation activities	We have made concerted efforts to remedy obvious corruption issues from April to June 2016. Measures we have taken included investigation into real situation, tutoring and guidance, targeted support to those lagged behind, delegation of responsibilities, and signing of letter of undertaking, creating a clean operating environment.
Timely purchase and distribution of learning materials and videos	We have guided employees to reinforce anti-corruption learning, purchased and distributed three sets of learning materials, 687 copies in total, and three pieces of videos to satisfy their learning needs.

Transparent and improved reporting platform

We are committed to the confidentiality of informants and the protection of their rights and interests, and would always carefully verify and investigate those trackable reporting and clues. In order to enable smooth supervisory channels, we established Qingfeng CMOG reporting platform and set up email and hotline for public report apart from 163 reporting platform, as part of its efforts to build up platform for wide-ranging supervision. In 2016, we have received 13 cases of reporting via telephone, email, incoming visits and letters, with 100% settlement of reported cases. Through improved reporting platforms, we have reinforced disciplinary rules to enhance their power as a deterrent and warning sign throughout the Company, safeguarded the Company’s interests, enhanced cohesion, and conveyed positive energy.



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Internal inspection

We have formulated Implementation Measures for Inspection of CMOC (Interim) to execute inspection system at the group level, and established inspection team to supervise the Company's employees, thus improving and standardizing supervision and binding mechanism. From April to August 2016, we have conducted specialized inspections over 12 affiliated units to further strengthen the supervision of employees.

Types of inspection

Regular inspection

- Targeted inspection on leaders of affiliated units
- One inspection in every two years

Specialized inspection

- In compliance with specific requirements of leaders of inspection team
- Inspection on an as-needed basis by case

Major ways of inspection



Attending meetings



Conducting interviews



Debriefing



Making visits and investigations



Conducting democratic appraisal and questionnaire surveys



Consulting and copying data



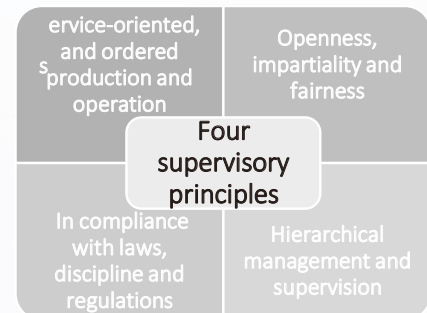
Collecting opinions and handling complaint letters



Requesting for instruction

Internal supervision

We have formulated Interim Provisions on Standardizing and Strengthening Supervision (Trial), putting forward four clearly defined supervision principles and ten priorities regarding on-site supervision, in order to further implement the Company's internal control system, standardize and strengthen supervision over sensitive matters in management activities, prevent management risks, effectively guard against violations of laws, regulations and discipline, protect the Company's legitimate interests, and better maintain the Company's image and reputation.



Ten priorities for implementation of on-site supervision

Preliminary supervision of tender (including invitation to tender)

Supervision of tender opening

Supervision of tender evaluation

Supervision of competitive negotiation and inquiry

Supervision of fixed-point business negotiation

Supervision of contract review and signing

Supervision of project acceptance

Supervision of qualification examination of labor recruitment

Supervision of appointment, dismissal, performance assessment and recruitment of middle-level cadres

Supervision of disposal of vacant properties, capital equipment and various waste and old materials

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12. CONTRIBUTION TO THE SOCIETY

By attaching equal importance to corporate growth and corporate responsibility, we have vigorously engaged in various charity activities to give back to the society through constant issuance of improved policies and active cooperation with communities.

Commitment to charity

Adhering to the principle of giving back to the society through practical actions, we are committed to the construction of a harmonious and stable production and operation environment, the maintenance of sound social orders and atmosphere, and the fulfilment of corporate social responsibility and public duty. Having provided financial support for operating locations including economic growth and actively engaged in various charity activities including poverty relief campaigns, we have been awarded Pioneer on Donation and Poverty Relief by Luanchuan County government, Henan for several consecutive years. And in 2016, we were named 2015 Philanthropic Enterprise for Poverty Relief of Luoyang City by Luoyang, Henan.

RMB2 million donation in sanitation trucks

In 2016, we generously donated RMB2 million worth of sanitation trucks (including 200 three-wheeled sanitation trucks, and various smart sanitation facilities such as 6 smart garbage trucks and 4 smart sweeper trucks) to the Bureau of Urban Utilities and Landscaping of Luanchuan County on the 19th Sanitation Workers' Day of Heinan Province, as a way to fulfil its corporate responsibility and help build Luanchuan County into a civilized city.



Brand new garbage trucks in place

On March 3, 2016, we launched the ceremony of poverty alleviation and education sponsorship, donating RMB15 million yuan of social charity fund for poverty alleviation and RMB2 million yuan of education fund for Luanchuan County, Henan.

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RMB17 million donation in poverty alleviation

Continuous support for education

We initiated “Autumn Education Sponsorship” in order to help excellent students from needy families go to universities and create opportunities for the less affluent ones to get out of poverty, providing financial support to a total of 91 needy students during the activity in 2016. As of now, we have provided financial support in education to Luanchuan County for three consecutive years, and helped thousands of needy students from Luanchuan County successfully receive college education.

Meanwhile, we encourage affiliated companies to actively support education, for example, Northparkes copper/gold mine has supported Indigenous Scholarship Program for long.



Australian Northparkes copper/gold mine — Indigenous Scholarship Program

In 2016, CMOC participated in the supervision of significant matters for more than 20 times, including various tests, selection of managerial personnel, and cooperation with the Finance Department in collecting debts, with a key focus on Tungsten Trade Company's road construction, CMOC's branch – 2nd Dressing Company's purchase of CH870 crushers, invitation of tender by CMOC regarding labor protection appliances, CMOC's branch – 3rd Dressing Company's purchase of high-pressure grinding rollers for crushing system renovation project, etc.

Volunteer projects

The volunteer culture of the Company, targeting at improving staff's ideological level based on well-established ethical standards with a focus on fostering common belief, constitutes the essence of the Company's civilization construction. We actively initiate various volunteer activities in the spirit of dedication, friendship, mutual help and progress to encourage and mobilize staff to pay attention to social dynamics, the Company's development, and participate in charity activities, thus facilitating civilization construction, rapid development and social image building of the Company.

Northparkes copper/gold mine, our subsidiary in Australia has launched a new volunteer initiative, with the aim of encouraging staff to provide assistance to local social organizations and community projects with their skills and experience. In 2016, employees of Northparkes copper/gold mine participated in 22 community volunteer projects in Middle and Western Australia and have provided voluntary services for 1,220 hours in total.

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13. ESG GUIDE CONTENT INDEX

Aspect	Disclosures	Reporting chapter	Page No.
A.	Environmental		
A1 General disclosure	Emissions	Environmental protection	P7
A1.1	The types of emissions and respective emissions data	Pollutant emission reduction	P8
A1.2	Greenhouse gas emissions in total (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	N/A	N/A
A1.3	Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	N/A	N/A
A1.4	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	N/A	N/A
A1.5	Description of measures to mitigate emissions and results achieved	Pollutant emission reduction	P8
A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	Pollutant emission reduction	P8
A2	Use of resources	Environmental protection	P7
A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	N/A	N/A
A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	N/A	N/A
A2.3	Description of energy use efficiency initiatives and results achieved	Resource utilization conservation	P9
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	Resource utilization conservation	P9
A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced	N/A	N/A

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Aspect	Disclosures	Reporting chapter	Page No.
A3	The environment and natural resources	Environmental protection	P7
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	Environmental protection	P7
B.	Social		
B1	Employment	Guarantee of rights and interests	P13
B1.1	Total workforce by gender, employment type, age group and geographical region	Equal employment	P13
B1.2	Employee turnover rate by gender, age group and geographical region	N/A	N/A
B2	Health and safety	Health and safety	P19
B2.1	Number and rate of work-related fatalities	N/A	N/A
B2.2	Lost days due to work injury	N/A	N/A
B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	Health and safety	P19
B3	Development and training	Career development and training	P17
B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	N/A	N/A
B3.2	The average training hours completed per employee by gender and employee category	N/A	N/A
B4	Labor standards	Guarantee of rights and interests	P13
B4.1	Description of measures to review employment practices to avoid child and forced labor	Employment in compliance with laws and regulations	P14
B4.2	Description of steps taken to eliminate such practices when discovered	Employment in compliance with laws and regulations	P14
B5	Supply chain management	Green supply chain	P23
B5.1	Number of suppliers by geographical region	N/A	N/A

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Aspect	Disclosures	Reporting chapter	Page No.
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	Green supply chain	P23
B6	Product responsibility	Product liability	P25
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	Client management system	P25
B6.2	Number of products and service related complaints received and how they are dealt with	Client management system	P25
B6.3	Description of practices relating to observing and protecting intellectual property rights	Concentration on technology enhancement	P25
B6.4	Description of quality assurance process and recall procedures	Client management system	P25
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	N/A	N/A
B7	Anti-corruption	Anti-corruption	P28
B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases	Anti-corruption	P28
B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	Anti-corruption	P28
B8	Community	Contribution to the society	P31
B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport)	Contribution to the society	P31
B8.2	Resources contributed (e.g. money or time) to the focus area	Contribution to the society	P31



洛陽樂川鉬業集團股份有限公司
China Molybdenum Co., Ltd.*



* For identification purposes only