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OVERVIEW

We are one of the leading gold mine hazardous waste treatment companies in the PRC focusing on (i) gold mine hazardous waste treatment, and (ii) recycling and extracting therefrom resources with economic value for sale. According to the F&S Report, we are the third largest gold mine hazardous waste treatment company in the PRC with a market share of approximately 10.0% in terms of revenue in 2020. We are also ranked the first in gold mine hazardous waste treatment volume in Shandong province and the PRC, with actual treatment volume of approximately 1.08 million tonnes, accounting for approximately 25.8% and 17.6% of the total actual treatment volume in Shandong province and the PRC, respectively, in 2020. We specialise in gold mine hazardous waste treatment and resource recovery, and comprehensive utilisation of gold mine hazardous wastes. We collect cyanide tailings, which is a kind of gold mine hazardous waste resulted from smelting of gold, from our upstream customers, which we, leveraging on our experience and expertise, detoxify the cyanide tailings and recover therefrom resources with economic value such as pyrite concentrate and gold-bearing pyrite concentrate. We then sell the recycled products to our downstream customers to attain comprehensive utilisation of gold mine hazardous wastes.

We are strategically located in Laizhou city, Shandong province. Due to rich gold resources and the mature gold mining industry chain, the gold mine production in Shandong province ranked the first in the PRC in 2019 and expected to continue to rank the first in 2020, according to the F&S Report. As at the Latest Practicable Date, we have two production facilities, where the gold reserves ranked first among the county-level cities in the PRC. The total site area of our production facilities is approximately 228,683 sq.m. and they process the gold mine hazardous wastes from our upstream customers and recycle them into recycled products for sale to our downstream customers. As at the Latest Practicable Date, we are the only company in Laizhou city, Shandong province that has obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局), which we are licensed to treat up to 1.16 million tonnes per year.

During the Track Record Period, our upstream customers for gold mine hazardous waste treatment services mainly comprised of gold smelting companies under gold mining companies with mine operations in Shandong province, whilst our downstream customers for the sale of recycled products mainly comprised of chemical manufacturing companies and trading companies of chemicals in the PRC. We have developed and maintained strong and stable relationships with industry-renowned customers, such as Shandong Gold Smelting Co., Ltd. (山東黃金冶煉有限公司) (a subsidiary of Shandong Gold Mining Co., Ltd. (山東黃金礦業股份有限公司), whose shares are listed on the Main Board (stock code: 1787) and Shanghai Stock Exchange (stock code: 600547)) (“**Shandong Gold Smelting**”) and Zhongkuang Gold Industry Company Limited (中礦金業股份有限公司) (“**Zhongkuang Gold**”), in the PRC.

We believe that our in-depth experience and knowledge, research and development capabilities and hazardous waste treatment technologies are core competitiveness qualities for our leading industry position in the PRC. Our research and development team is led by Mr. Sheng, our executive Director and chief technical officer, who has more than 29 years

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of experience in chemical related industry and the qualification of intermediate engineer from Yantai Chemical Engineering and Technical Evaluation Committee (煙臺市化工工程技術職務中級評審委員會). As at the Latest Practicable Date, we had obtained governmental approvals or applied various patents in the PRC, both invention and utility model, for the technologies or devices for expanding our product offerings, upgrading our technologies on comprehensive utilisation and harmless treatment of gold mine hazardous wastes and developing new processing methods.

According to F&S Report, the gold mine hazardous waste treatment market in the PRC, particularly in Shandong province, is expected to grow due to increasing output rate of gold mine hazardous waste, increasing utilisation value through technology improvement, more utilise channels and stricter environmental requirements. We believe that by leveraging on the industry expertise and technical know-how that we possess, together with the growth of the gold mining industry and support of favourable government policies, we are well-positioned to capture more business opportunities from gold mining companies, chemical manufacturing companies and trading companies of chemicals in the PRC. For more details on the market drivers relating to our businesses, see “Industry Overview — Drivers of Gold Mine Hazardous Waste Market in China” in this document.

While the gold mine hazardous waste treatment services and the sale of recycled products were our major business activities during the Track Record Period, we also derived revenue from hazardous waste storage rental services since November 2018.

The following table sets out our revenue by business activities during the Track Record Period:

	2018		Year ended 31 December 2019		2020	
	RMB'000	%	RMB'000	%	RMB'000	%
Gold mine hazardous waste treatment services	41,014	40.1	61,567	46.1	107,958	52.6
Sale of recycled products	57,642	56.4	56,413	42.2	82,514	40.2
Hazardous waste storage rental services	1,083	1.0	14,490	10.8	14,507	7.1
Others ^(Note)	2,542	2.5	1,194	0.9	413	0.1
Total	102,281	100.0	133,664	100.0	205,392	100.0

Note: Others represented revenue from the trading of recycled products, which mainly included desulphurisation gypsum, copper concentrate powders and waste rocks, that we procured from our suppliers during the Track Record Period.

For the years ended 31 December 2018, 2019 and 2020, our net profits amounted to approximately RMB30.7 million, RMB48.5 million and RMB72.9 million, respectively.

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COMPETITIVE STRENGTHS

We believe that our success can be attributed to the following competitive strengths:

1. We are one of the leading gold mine hazardous waste treatment companies in the PRC

We are one of the leading gold mine hazardous waste treatment companies in the PRC focusing on (i) gold mine hazardous waste treatment, and (ii) recycling and extracting therefrom resources with economic value for sale. According to the F&S Report, we are the third largest gold mine hazardous waste treatment company in the PRC with a market share of approximately 10.0% in terms of revenue in 2020. We are also ranked the first in gold mine hazardous waste treatment volume in Shandong province and the PRC, with treatment volume of approximately 1.08 million tonnes, accounting for approximately 25.8% and 17.6% of the total treatment volume in Shandong province and the PRC, respectively, in 2020. Moreover, we are the only company in Laizhou city, Shandong province which has obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau. We believe that our proven track record in the PRC is mainly attributable to our Group’s management, experience and capabilities, and has helped differentiate us from our existing competitors and other new market entrants.

We believe that we are the pioneer in the PRC in providing gold mine hazardous waste treatment services, and recycling and extracting therefrom resources with economic value for sale. Our position in the industry has been enhanced and supported by national and local policies in the PRC in promoting hazardous waste treatment. Pursuant to the “Industrial Structure Adjustment Guidance Catalogue (2019 version)” (《產業結構調整指導目錄(2019年本)》), the PRC government has continued to promote harmless treatment of cyanide tailings and our comprehensive utilisation of gold mine hazardous wastes such as cyanide tailings is categorised as the encouraged industry under the category of Environmental Protection and Resource Conservation Comprehensive Utilisation Project (環境保護與資源節約綜合利用項目).

According to the F&S Report, the increasingly strict requirements on environmental protection drive the growth of the gold mine hazardous waste treatment market, the total revenue of the market in Shandong province increased from approximately RMB59.5 million in 2015 to RMB1,288.8 million in 2020, representing a CAGR of approximately 85.0% from 2015 to 2020. It is also expected that the increasing gold mine hazardous waste output volume and stricter environmental requirements will drive the gold mine hazardous waste treatment market in Shandong province to further increase to approximately RMB2,921.2 million in 2025, representing a CAGR of approximately 17.8% from 2020 to 2025, according to the F&S Report.

We believe that our Group is able to maintain the leading position in the gold mine hazardous waste treatment market riding on the support from local government and favourable policies in the PRC.

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2. We are situated in one of the areas with the largest production of gold in the PRC

We are strategically located in Laizhou city, Shandong province, to provide us with the proximity to the largest gold production area in the PRC. Laizhou city, Shandong province is rich in natural resources, among which its gold reserves is ranked first in terms of proven gold reserves among the county-level cities in the PRC, according to the F&S Report. The gold mine production in Shandong province also ranked the first in the PRC in 2020 according to the F&S Report. Shandong province is also the area with the largest output volume of gold mine hazardous wastes in the PRC which houses the three major gold mining companies that are customers of our Group during the Track Record Period, namely Shangdong Gold Smelting, Zhongkuang Gold and a state-owned gold mining company with its headquarter in Shandong province, whose shares are listed on the Main Board (“**Customer Z**”). The aggregate annual gold mine production volume of these three major gold mining companies amounted to approximately 66 tonnes, which accounted for approximately 21.8% of total gold mine production in the PRC in 2020.

In accordance with the “Notice on Strengthening the Management and Supervision of Hazardous Wastes” (《關於加強危險廢物經營監管的通知》) issued by the Department of Environmental Protection of Shandong Province (山東省環保廳), the principle of “close-by disposal”, that is, the principle of gold mines which produce hazardous waste being close to the hazardous waste treatment plants, is adopted. As such, our Group has geographical advantages. We are also the only company in the Laizhou city, Shandong province providing gold mine hazardous waste treatment services during the Track Record Period and up to the Latest Practicable Date. This allows us to provide close-by upstream services exclusively to the gold mining companies around the region.

3. We have proven track record with stable relationship and maintain a strong customer base

We have developed and maintained strong and stable relationships with industry-renowned customers in the PRC. We commenced business relationship with Shandong Gold Smelting, Zhongkuang Gold and Customer Z in 2017, 2014 and 2019, respectively. According to the F&S Report, these three customers were the three largest hazardous waste producers in Shandong province, with an aggregate output volume of approximately 1.3 million tonnes in 2020. The actual volume of gold mine hazardous wastes that we treated for these three customers amounted to approximately 1.0 million tonnes for the year ended 31 December 2020.

We believe we have advantages over our existing competitors and new entrants in the industry to obtain new engagements from customers because we are able to capitalise on our accumulated industry reputation, our close proximity to our customers, and stable cooperative relationship with leading industry participants to secure more contracts and expand business opportunities in the future.

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4. We possess strong technical capabilities in the gold mine hazardous waste treatment process and production of recycled products

We believe that our in-depth experience and knowledge, strong research and development capabilities and hazardous waste treatment technologies are core competitiveness qualities for our leading industry position in the PRC. We have technical capabilities and our technical personnel conducting research and development activities possess the professional expertise and extensive experience in the gold mine hazardous waste treatment and recycling industry and environmental protection in the PRC.

We developed strong collaborations with renowned universities, such as Shandong University (山東大學), and scientific research institutes, such as Regional Resources and Environmental Development Research Institute of Shandong Province (山東省區域資源與環境發展研究院), in the PRC on research and development of technology for comprehensive utilisation of gold mine hazardous wastes. We also conducted an electric furnace smelting research with Chaoyang NEU Minerals and Metallurgy Institute (朝陽東大礦業研究院) in 2020 for gold tailings processing technology. We have set up HC R&D with the intention to further enhance our technologies in producing high-quality recycled products in 2020. We have also engaged third-party organisations to develop new technologies on gold mine hazardous waste treatment and recycled products development since January 2021. Our Group intends to penetrate the production chain and promote comprehensive utilisation of gold mine hazardous wastes, which we believe could increase our Group’s competitiveness by enhancing the value of our high-quality recycled products.

By relying on our technical advantages and ability to efficiently materialise comprehensive utilisation of gold mine hazardous wastes, as at the Latest Practicable Date, we had registered or obtained governmental approvals of three patents in the PRC in relation to the invention of a device for dust isolation and recovery in the conveyor belt of gold tailings, a pump-mixing pipeline dosing device for the integrated utilisation of gold cyanide tailings and a side device installed at floatation machine for dust removal, and we are in the progress of applying for various patents in the PRC, including both invention and utility model, such as a device for removing harmful impurities before flotation of high-grade sulphur concentrates from cyanide tailings, a comprehensive utilisation and harmless treatment of cyanide tailings and a device for pre-treatment of gold mine tailings.

Overall, we believe that our technical and strong research and development capabilities will enable us to continue to maintain our market leadership and capture new market opportunities.

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5. We have an experienced and professional management team

Our executive Directors have extensive in-depth industry experience, namely, Mr Liu, our founder and executive Director, has over ten years of experience in operation and management business of metal ore waste processing, Mr. Zhan, our executive Director and chief executive officer of our Company, has more than eight years of experience in corporate management in the gold mine hazardous waste treatment industry, and Mr. Sheng, our executive Director and chief technical officer of our Company, has more than 29 years of experience in chemical related industry.

Our senior management team consists of professionals with substantial industry, management and operational experience. A majority of our senior management team have been working in the relevant industries, such as metal processing industry, for more than 20 years.

Their extensive industry knowledge and in-depth understanding of the regulatory environment have enabled them to foresee the development trend of the industry we operate in and the governmental regulations and policies. We believe that our Directors and our senior management team possess the insight, vision and knowledge required to effectively execute our growth strategy in the face of challenging economic conditions.

BUSINESS STRATEGIES

In order to leverage on our aforementioned competitive strengths to capture the growing market demand, we plan to have a series of incremental capacity expansions of our production facilities and enhancement of production capabilities to diversify products offerings to capitalise on the growing demand of gold mine hazardous waste treatment services and recycled products.

We intend to fund our business strategies by utilising net [REDACTED] from the [REDACTED] with details set out below. Any shortfall in relation to our expansion of production capacity and capabilities is intended to be financed by internal resources and/or external borrowings of our Group.

1. Increase our production capacity and capabilities to solidify our market position

According to the F&S Report, the stricter environmental requirements, the treatment demand from increasing annual hazardous waste output and accumulated hazardous waste which has not been treated from historical period are expected to drive the continuous increase in the treatment volume of gold mine hazardous waste in Shandong province from approximately 4.2 million tonnes in 2020 to 5.7 million tonnes in 2025, representing a CAGR of approximately 6.2% from 2020 to 2025. Despite the environmental regulations having already been strictly implemented in Shandong province for the past few years, the treatment volume is expected to increase moderately up to 2025 due to the expected relatively stable gold mine production and gold mine hazardous waste production in Shandong province.

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As at the Latest Practicable Date, our Group possessed the Hazardous Waste Business Licences which allowed our Group to conduct the gold mine hazardous waste treatment business with the permitted annual treatment capacity up to 1.16 million tonnes. For the year ended 31 December 2020, the utilisation rates (representing the percentage of actual annual treatment volume over the permitted annual treatment volume pursuant to the Hazardous Waste Business Licence) of each of our production facility in Jincheng town and Shahe town, Laizhou city was approximately 95% and 92%, respectively. We consider that it is not feasible for us to further capture the market growth of gold mine hazardous waste treatment services by utilising our existing production facilities and existing Hazardous Waste Business Licences as the utilisation rate of our two existing production facilities had reached such a high level.

As such, our Directors consider that we can only capture the business opportunities arising from the growing demand of the gold mine hazardous waste treatment services in the coming years and solidify our leading market position in Shandong province by increasing the annual treatment volume of our Group. Our Group plans to construct a new production facility (the “**New Production Facility**”) and obtain another new Hazardous Waste Business Licence with an additional permitted annual treatment capacity of 600,000 tonnes. For the New Production Facility, it is planned that the acquisition of the land use rights will be done by end of 2021 and the construction will be completed in two phases, with the first phase (construction of the production compartment for gold mine hazardous waste treatment and the new research and development laboratory) and second phase (construction of the production compartment for production of recycled products) planned to be completed by the end of the second quarter of 2022 and by the end of 2022, respectively. For obtaining the new Hazardous Waste Business Licence, based on our historical experience, we expect that we would commence the trial operation of the production compartment for gold mine hazardous waste treatment within three months after the completion and obtain the new Hazardous Waste Business Licence by the mid of 2023 upon the completion of the trial operation the New Production Facility.

Our Directors are confident that we are capable to secure more contracts for the additional permitted annual treatment capacity after taking into account (i) our Group had been successful in diversifying our customer base by entering into contracts with new customers during the Track Record Period, including Customer Z which was one of the leading gold mining companies with its headquarter in Shandong province and commenced business relationship with us in 2019, (ii) our established operating history and proven track record in the industry also enhance our reputation and assist us in securing contracts from both our existing customers and new customers, and (iii) the strong demand of the gold mine hazardous waste services in the Shandong province which we had also experienced a strong demand during the Track Record Period as evinced by our growth in revenue from gold mine hazardous waste treatment services of approximately RMB41.0 million in 2018 to RMB108.0 million in 2020.

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Apart from the plan for increasing the aggregate treatment capacity of gold mine hazardous wastes, leveraged from our expertise and experience in comprehensive utilisation of gold mine hazardous waste and recovery of recycled products, we intend to further diversify our product offerings in our sale of recycled products business. Our goal has always been to continuously improve our research and development capabilities and technical skills to achieve a high utilisation rate of such gold mine hazardous wastes. As a result, more resources with economic value can be extracted therefrom. Our Directors consider that it is beneficial to our Group to diversify our product offerings in our sale of recycled products business.

During our operation process, other than the extraction of pyrite concentrate and gold-bearing pyrite concentrate, we also extract high silicon tailings from the gold mine hazardous waste collected from our upstream customers. High silicon tailings can be further processed to construction aggregates for construction works and some other recycled products as by-products for sale. For more details, see “— Operation Process” below.

According to the F&S Report, construction aggregate is a very important construction material, and is widely used in building construction, high-speed railway construction, highway construction and interior decoration. With the further acceleration of the PRC’s urbanisation process, the demand for construction aggregate is expected to continuously increase, leading to a growing market. Construction aggregate can be recovered during gold mine hazardous waste treatment process. Therefore, the construction aggregate market is a major downstream market of gold mine solid waste treatment market, and an important part of circular economy in the mining industry. The average price of construction aggregates in the PRC increased from approximately RMB64.5 per tonne in 2015 to RMB149.9 per tonne in 2020, with the decrease in supply caused by increasingly strict environmental policies of construction aggregates production. The price of construction aggregates is expected to continue to increase to approximately RMB190.5 per tonne in 2025 at a CAGR of approximately 4.9%. As such, our Directors are of the view that the expansion of our recycled product offerings to construction aggregates is a logical organic growth of our business.

Before deciding to diversify our products offering to construction aggregates extracted from high silicon tailings, we have engaged an Independent Third Party consultant to prepare a feasibility report (the “**Feasibility Report**”) on the proposed construction of production compartment for the recovery of recycled products, mainly construction aggregates, from high silicon tailings to evaluate, among others, the market and prospect of sale of construction aggregates recovered from high silicon tailings, analysis on the production technology and method, costs and environmental impact for the construction of such production compartment. Based on the recommendation of the Feasibility Report in terms of the feasibility on the construction of the production compartment for the recovery of recycled products from high silicon tailings and the customers’ feedback on the potential market, we plan to construct a production compartment in the New Production Facility which will be devoted to the process of recovery of recycled products, mainly construction aggregates, from high silicon tailings.

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It is planned that the construction of such a production compartment will be completed by the end of 2022. We expect that our annual production capacity of construction aggregates will be approximately 185,000 tonnes upon the commencement of the operation of the production compartment in the New Production Facility. As at the Latest Practicable Date, our downstream customers have indicated their interest in purchasing construction aggregates should we have the production capabilities to produce construction aggregates. We believe that there will be sufficient demand for construction aggregates.

The estimated capital expenditure for constructing the New Production Facility

As at the Latest Practicable Date, we had not definitively identified any land parcel for the purpose of constructing the New Production Facility. However, it is anticipated that the target location of the New Production Facility would be located in Laizhou city, Shandong province, to enjoy the geographical advantages. In selecting the appropriate geographical location for the New Production Facility, our Directors take into account factors, including but not limited to, environmental preservation concerns, as well as the availability of a reliable electricity, water supply and sewage system. We have ongoing consultations with the local government authorities in Shandong province to discuss the selection of land for constructing the New Production Facility.

Our Directors consider that the parcel of land on which the New Production Facility will be constructed is expected to have a site area up to 166,500 sq.m. with an estimated building area of approximately 87,300 sq.m. (being approximately 52.4% of the site area). The estimated building area of approximately 87,300 sq.m. is intended to house the following facilities:

- approximately 23,000 sq.m. will be used for production compartments to place the machinery and equipment that are intended to be used for the gold mine hazardous wastes treatment and production of recycled products;
- approximately 57,000 sq.m. will be used as warehouse to store the gold mine hazardous waste collected from our upstream customers, high silicon tailings and recycled products including pyrite concentrate, gold-bearing pyrite concentrate, and construction aggregates;
- approximately 5,000 sq.m. will be used as the new research and development laboratory; and
- approximately 2,300 sq.m. will be used as office for our administrative staff and dormitory.

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It is expected that major capital expenditure required for constructing the New Production Facility includes (i) the land acquisition cost, (ii) the construction cost, and (iii) the purchase costs of machinery and equipment. The following table sets forth the net [REDACTED] from the [REDACTED] we intend to apply on the major capital expenditure for setting up the New Production Facility:

	Net [REDACTED] from the [REDACTED]		% of the net [REDACTED] from the [REDACTED]
	<i>RMB (million)</i>	<i>HKD (million)</i>	
Land acquisition cost	[REDACTED]	[REDACTED]	[REDACTED]
Construction cost	[REDACTED]	[REDACTED]	[REDACTED]
Purchase costs of machinery and equipment <i>(Note)</i>	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]

Note: We intend to partially finance the purchase costs of the machinery and equipment for the production in the New Production Facility by the net [REDACTED] from the [REDACTED] and the remaining purchase costs of approximately HK\$[REDACTED] million (equivalent to approximately [REDACTED] million) will be financed by our internal resources and external financing (if necessary). For details, see “Future Plan and Use of [REDACTED]” in this document.

Expansion of our production team

We also need to expand our operation team for the operation of the New Production Facility. We intend to utilise approximately HK\$[REDACTED] (equivalent to approximately RMB[REDACTED]) of the net [REDACTED] from the [REDACTED], representing [REDACTED] of the net [REDACTED] of the [REDACTED], for the payment of wages of the production team for the operation of the New Production Facility from the commencement of trial operation of the New Production Facility up to the mid of 2023.

2. Strengthen our research and development capabilities to improve our efficiency on treatment services and diversify our product offerings

We will continue to strengthen our research and development capabilities, commit to the quality assurance of our services and products, and continue to increase our competitiveness as a gold mine hazardous waste treatment company with a dominant position in the PRC. With the aim of improving our treatment and recycling techniques, reducing production cost, and diversifying our product offerings, we will devote more resources to enhance our research and development capabilities by establishing a new research and development laboratory in the New Production Facility as well as expanding our research and development team.

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Establish a new research and development laboratory

To solidify our market position by strengthening our technical expertise on hazardous waste treatment and resource utilisation and further expand our product offerings, our Directors consider that we need a new research and development laboratory. As such, our Group intends to establish a new research and development laboratory with an estimated building area of approximately 5,000 sq.m. in the New Production Facility. The construction of the new research and development laboratory is planned to be completed by the end of 2021. Further, our Group intends to utilise approximately HK\$[REDACTED] (equivalent to approximately [REDACTED]), representing [REDACTED]% of the net [REDACTED] from the [REDACTED], to purchase the machinery and equipment for the research and development purpose. Our Directors also consider that establishing a new research and development laboratory can facilitate our research and development activities and avoid disruption on production process of the existing production facilities.

Expand our research and development team

To cater for the increasing demand of our research and development function, we need to expand our research and development team to strengthen our research and development capabilities. We intend to utilise approximately [REDACTED] (equivalent to approximately [REDACTED]) from the net [REDACTED] of the [REDACTED], representing approximately [REDACTED]% of the net [REDACTED] of the [REDACTED] for the hiring of nine staffs from July to December 2021.

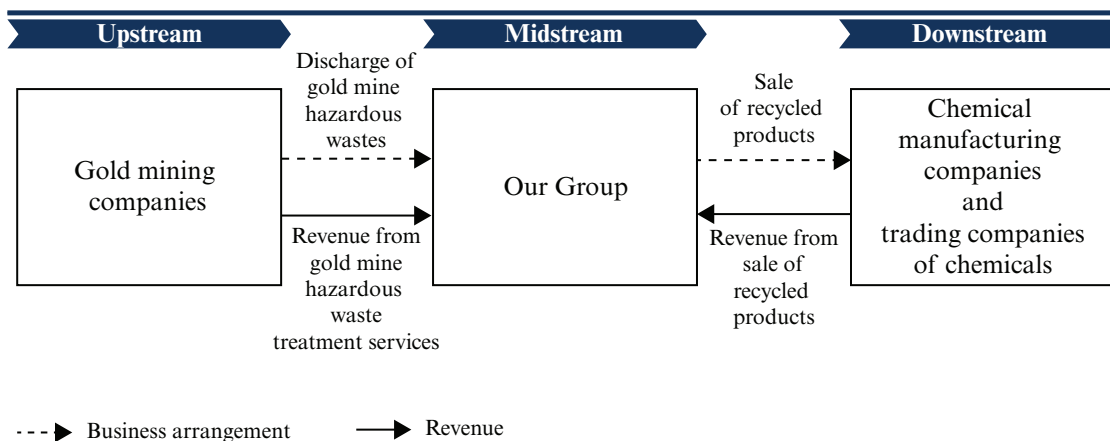
For the detailed discussion of the use of net [REDACTED] from the [REDACTED], see “Future Plans and Use of [REDACTED] — Use of [REDACTED]” in this document.

OUR BUSINESS MODEL

We are one of the leading gold mine hazardous waste treatment companies in the PRC focusing on (i) gold mine hazardous waste treatment, and (ii) recycling and extracting therefrom resources with economic value for sale. We are specialised in resource recovery and comprehensive utilisation of gold mine hazardous wastes. We provide gold mine hazardous waste treatment services to our upstream customers which are mainly gold smelting companies under gold mining companies with mine operations in Shandong province. We collect cyanide tailings, which is a kind of gold mine hazardous waste resulted from smelting of gold, from our upstream customers, which we, leveraging on our experience and expertise, detoxify the cyanide tailings and recover therefrom resources with economic value, such as pyrite concentrate and gold-bearing pyrite concentrate. We then sell the recycled products to our downstream customers, which are mainly chemical manufacturing companies and trading companies of chemicals, to attain comprehensive utilisation of gold mine hazardous wastes.

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The following diagram shows our business activities in gold mine hazardous waste treatment services and sale of recycled products, during the Track Record Period:



During the Track Record Period, our upstream customers mainly engaged us to provide treatment services for cyanide tailings, which is a kind of gold mine hazardous waste resulted from smelting of gold. These cyanide tailings consist of cyanide, which is one of only a few chemical reagents that will dissolve gold in water. For both technical and economic reasons, cyanide is the chemical of choice for the recovery of gold and silver from ores. Cyanide is a toxic substance and can be lethal if ingested or inhaled in sufficient amounts. Gold mining companies employ stringent risk managements systems to prevent injury or damage from the use of cyanide. Cyanide in mining solutions is collected, either be recycled or disposed, after gold is removed. Due to the restrictions on technical expertise and cost consideration, gold smelting companies engage gold mine hazardous waste treatment companies, like us, to collect the cyanide tailings from them and pay the corresponding treatment fees.

In our operation process, we are capable of detoxifying the gold mine hazardous wastes. Further, we are able to extract resources with economic value from the gold mine hazardous wastes. Pyrite concentrate and gold-bearing pyrite concentrate are the major recycled products extracted and it can be used for the production of sulphur and sulphuric acid which can be applied in various industrial process. We usually sell them to our downstream customers which are chemical manufacturing companies and trading companies of chemicals.

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While gold mine hazardous waste treatment services and sale of recycled products were our major business activities for revenue generation during the Track Record Period, we also derived revenue from the hazardous waste storage rental services since November 2018. For further details of our hazardous waste storage rental service, see “— Our Production Facilities — Our Warehouses” below.

The following table sets forth our revenue by business activities during the Track Record Period:

	2018		Year ended 31 December 2019		2020	
	RMB'000	%	RMB'000	%	RMB'000	%
Gold mine hazardous waste treatment services	41,014	40.1	61,567	46.1	107,958	52.6
Sale of recycled products	57,642	56.4	56,413	42.2	82,514	40.2
Hazardous waste storage rental services	1,083	1.0	14,490	10.8	14,507	7.1
Others ^(Note)	2,542	2.5	1,194	0.9	413	0.1
Total	102,281	100.0	133,664	100.0	205,392	100.0

Note: Others represented revenue from the trading of recycled products, which mainly included desulphurisation gypsum, copper concentrate powders and waste rocks, that we procured from our suppliers during the Track Record Period.

Our services

During the Track Record Period, we are engaged by gold smelting companies under gold mining companies with mine operations in Shandong province to provide gold mine hazardous waste treatment services. For the years ended 31 December 2018, 2019 and 2020, revenue generated from the gold mine hazardous waste treatment services was approximately RMB41.0 million, RMB61.6 million and RMB108.0 million, respectively, representing approximately 40.1%, 46.1% and 52.6% of our total revenue for the same periods, respectively.

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The table below sets out the treatment volumes in tonnes, the treatment fee ranges and average treatment fee per tonne of our gold mine hazardous wastes treatment services during the Track Record Period:

	Year ended 31 December		
	2018	2019	2020
Treatment volume in tonnes	560,067 ⁽¹⁾	805,811	1,082,913
Treatment fee range (<i>per tonne</i>) ⁽²⁾	RMB49–178	RMB40–175	RMB40–175
Average treatment fee (<i>per tonne</i>) ⁽²⁾			
— exclusive of VAT	RMB73	RMB76	RMB100
— inclusive of VAT	RMB77	RMB81	RMB106

Notes:

- (1) A small portion of treatment volume in the first quarter of 2018 was collected by our Group free of charge as before the implementation of strict environmental protection policies by the PRC government in the recent years (such as the listing of cyanide tailings as hazardous waste and the setting of environmental protection tax for hazardous waste which came to effective by 1 January 2018), there was less incentive for the gold mining companies to pay for the gold mine hazardous waste treatment services and we agreed with a gold smelting company to collect the gold mine hazardous waste from it with no treatment fee for extracting recycled products with economic value therefrom.
- (2) The fluctuation of treatment fee per tonne was mainly attributable to the composition of gold mine hazardous wastes. In general, treatment fee of gold mine hazardous wastes with higher mineral/metal-bearing ratios will be lower.

Since November 2018, we also derived revenue from the hazardous waste storage rental services. For the years ended 31 December 2018, 2019 and 2020, revenue derived from hazardous waste storage rental services was approximately RMB1.1 million, RMB14.5 million and RMB14.5 million, respectively, representing approximately 1.0%, 10.8% and 7.1% of our total revenue for the same periods, respectively. See “— Our Production Facilities — Our Warehouses” below for further details.

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Our products

During our operation process, we are able to recycle and extract from gold mine hazardous wastes resources with economic value, such as pyrite concentrate and gold-bearing pyrite concentrate, for sale. For the years ended 31 December 2018, 2019 and 2020, revenue generated from the sale of recycled products was approximately RMB57.6 million, RMB56.4 million and RMB82.5 million, respectively, representing approximately 56.4%, 42.2% and 40.2% of our total revenue for the same period, respectively.

The following sets out the sales volumes in tonnes, the selling price ranges and average selling prices per tonne of recycled products sold during the Track Record Period:

	Year ended 31 December		
	2018	2019	2020
Pyrite concentrate			
Sales volume in tonnes <i>(approximately)</i>	280,641	316,137	463,740
Selling price range <i>(per tonne)</i> ^(Note)			
— including VAT	RMB220–360	RMB180–300	RMB170–280
Average selling price <i>(per tonne)</i> ^(Note)			
— exclusive of VAT	RMB205	RMB178	RMB166
— inclusive of VAT	RMB239	RMB203	RMB188

Note: The fluctuation of selling price per tonne was mainly attributable to the composition of recycled products. In general, selling price of recycled products can be higher when (i) they have higher bearing ratios of gold, sulphur or iron and/or (ii) the market demand of sulphuric acid is higher.

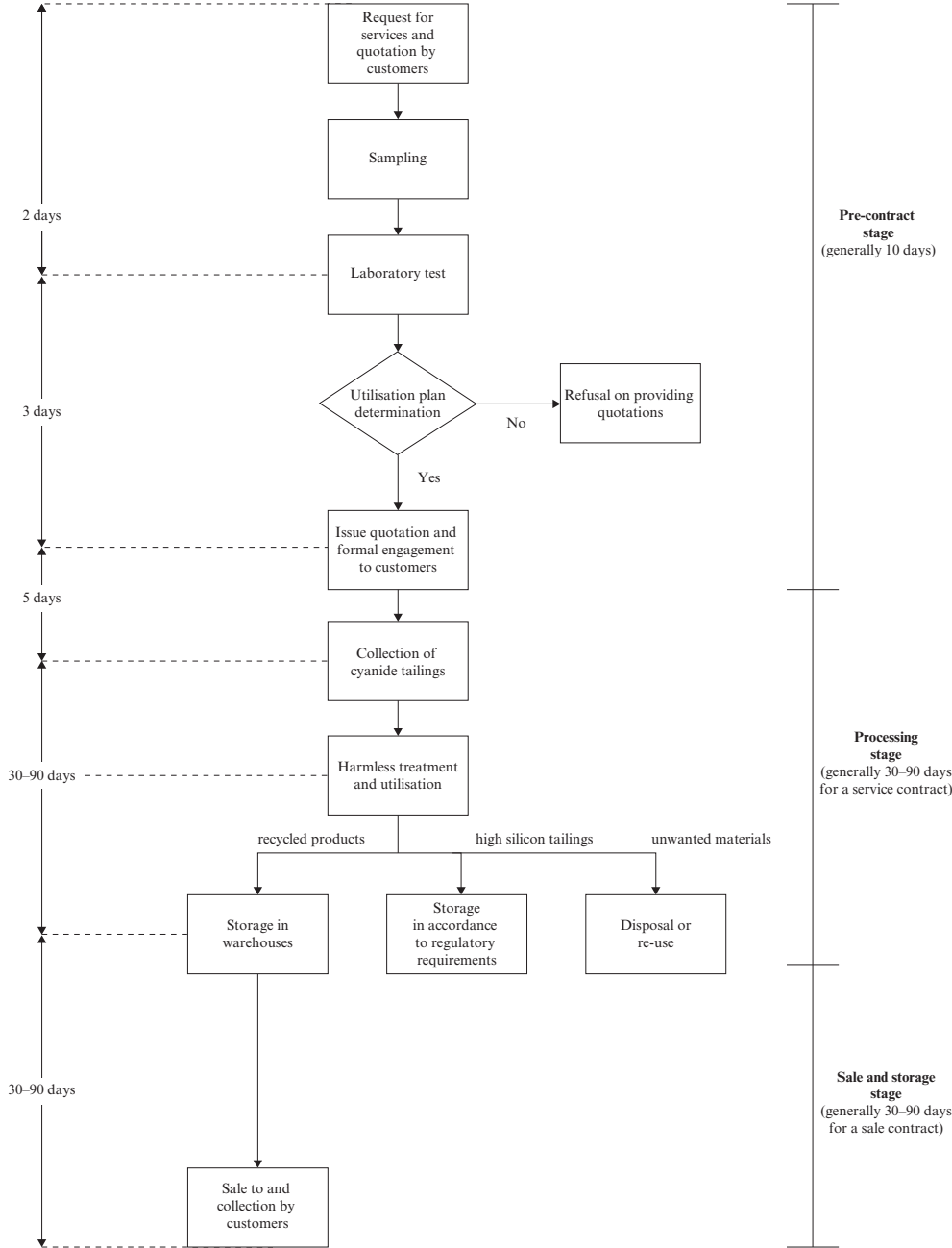
We commenced the sale of gold-bearing pyrite concentrate to our downstream customers in 2020. For the year ended 31 December 2020, the sales volume of gold-bearing pyrite concentrate amounted to approximately 16,601 tonnes, with a selling price range (inclusive of VAT) of approximately RMB334 to RMB410 per tonne and an average sell price of approximately RMB331 per tonne (exclusive of VAT) and RMB374 per tonne (inclusive of VAT).

During the Track Record Period, we also generated revenue from trading of recycled products such as desulphurisation gypsum, copper concentration powders and waste rocks. Occasionally, we purchased recycled products from our suppliers and sold to our downstream customers with certain mark-up. However, our Directors confirm that we are not actively pursuing and do not intend to pursue business opportunities in trading of recycled products actively, as these trading activities were conducted only for maintaining good business relationship with our customers and suppliers. During the Track Record Period, the total revenue from the trading of recycled products was approximately RMB2.5 million, RMB1.2 million and RMB0.4 million, respectively, representing approximately 2.5%, 0.9% and 0.1% of our total revenue for the same periods, respectively. Certain downstream customers of our trading of recycled products during the Track Record Period were connected persons of Mr. Liu, for further details, see “Financial Information — Related Parties Transactions” in this document.

BUSINESS

OPERATION PROCESS

The following diagram sets out the key operating stages of for our gold mine hazardous waste treatment services and our sale of recycled products as:



Note: The timeframe is calculated on an approximate basis and may vary from time to time depending on various factors including the quality of the gold mine hazardous wastes and our agreement with the customer on the timeframe for the material stages.

BUSINESS

Generally, our gold mine hazardous waste treatment services consist of three major stages, namely (i) pre-contract stage, (ii) processing stage, and (iii) sale and storage stage. Before entering into formal engagement with our customers, we assess the quality of the gold mine hazardous wastes to be collected from the potential upstream customers to decide whether to proceed with quotation negotiation. We also conduct sampling and testing to formulate an utilisation plan. When engagement is formalised, our procurement team then engages a transportation company for the transportation of gold mine hazardous wastes to our production facilities, and we subsequently employ a series of processing procedures in our production stage, to detoxify and to extract resources with economic value from the gold mine hazardous wastes for sale. After processing, our recycled products are stored in our warehouse pending for sale and collection by our downstream customers.

Details of key operating stages as illustrated in the diagram above are set forth as the following:

Pre-contract stage

We maintain long-standing business relationships and regular contacts with our upstream customers who are mainly gold smelting companies under gold mining companies with mine operations in Shandong province. Our sales team also takes initiatives to approach new customers to obtain contracts for the gold mine hazardous waste treatment services. Typically, our customers do not conduct open tenders for the gold mine hazardous waste treatment services. According to the F&S Report, it is in line with the market practice.

Before the formal engagement, we need to assess the quality of the cyanide tailings such as the bearing ratio of gold, sulphur and iron of the batch of cyanide tailings to be collected to decide whether to proceed with quotation negotiation. We first obtain certain sampling of gold mine hazardous waste from the potential customers and conduct a series of laboratory testings to assess the composition of the batch of gold mine hazardous wastes.

Our production team is responsible for formulating an utilisation plan. We also assess our prevailing capacity to allocate sufficient labour and resources to that batch of gold mine hazardous wastes and our ability to recover resources with economic value to see if there can be an adequate profit margin for us. We then prepare budgets based on the information provided by our potential customers, such as quantity to be collected, arrangement of transportation and time constraints. We only take up the engagement when we consider that it will be profitable to process and treat the batch of gold mine hazardous waste.

If we decide that we will turn down the potential customers.

BUSINESS

For the years ended 31 December 2018, 2019 and 2020, we had three, five and eight customers who we provided gold mine hazardous wastes treatment services, respectively, which were mainly gold smelting companies under gold mining companies with mining operations in Shandong province.

Processing stage

Upon receipt of the internal approval and communication with customers on key contract terms, we will commence preparation of the contract. Our procurement team then engage, a transportation company for the transportation of gold mine hazardous wastes from our upstream customers to our production facilities.

Once the gold mine hazardous wastes arrive at our production facilities, we place gold mine hazardous wastes to be processed at the warehouse for the first step of detoxification, namely airing. Gold mine hazardous wastes stored in the warehouse are flipped and rolled from time to time, as the process of airing of tailings, in order to speed up the volatilisation of free cyanide ion and other materials. Major steps of our processing procedures employed at our production facilities include:

Hydration – water is added to the gold mine hazardous wastes to turn them from solid status to slurry form to facilitate the forth coming processes.

Screening – the slurry then passes through the screening plant to screen out unwanted sands and rocks. Those unwanted sands and rocks will then be used for road construction within the production facilities or landfill.

Activation and flotation – keep stirring the slurry and then the slurry is shipped to the activation tank. After the process of activation, flotation method is used. We add consumables such as xanthate into the slurry for various chemical reactions to separate the pyrite concentrate from other chemicals. We generally use xanthate as the flotation agent to induce the pyrite concentrate to adhere to the froth and float while other materials, such as high silicon tailings, sink. The froth with resources with economic value for sale such as pyrite concentrate or gold-bearing pyrite concentrate, and the high silicon tailings will then be passed to different filter press plants.

Neutralisation – during the activation and flotation processes, exhaust fumes due to chemical reactions will be generated. We need to add consumables including chemical agents to absorb these unwanted by-products. Those unwanted fumes will then be neutralised and solidified as chemical wastes.

Filter and dewatering – filter press plant is used to separate solid products from the liquid and to dry them. We then collect the respective pyrite concentrate and gold-bearing pyrite concentrate for sale or high silicon tailings for storage, and the unwanted liquid can be recycled for the hydration process.

BUSINESS

After these processes, the gold mine hazardous wastes will be turned to (i) recycled products such as pyrite concentrate and gold-bearing pyrite concentrate, (ii) high silicon tailings for further processing to construction aggregates and some other recycled products as by-products, and (iii) unwanted materials such as sands and rocks at the screening stage and solidified chemical wastes at the neutralisation stage. For recycled products and high silicon tailings which are useful to our Group, we will continue to the sale and storage stage. For those unwanted materials, we generally re-use those sands and rocks on road construction within our production facilities. For the solidified chemical waste, we generally engage a specialised third party to dispose them. The quantity of these wastes was minimal and our cost incurred for disposing them was less than RMB25,000 per year during the Track Record Period.

Sale and storage stage

Recycled products

After processing the gold mine hazardous wastes, recycled products are stored in our warehouses pending for sale and collection by customers.

For the sale of recycled products, we negotiate and enter into framework sales contracts with our customers of sale of recycled products which set out, amongst others, the approximate price range which is subject to market fluctuation, recycled products specifications and the agreed transportation arrangement which our customers. Generally, our customers would not commit a minimum purchase amount of our recycled products in the framework sales contracts. They will place purchase orders to us by batch from time to time. Our customers generally collect the recycled products from our production facilities at their own costs.

During the Track Record Period, we had over 40 customers purchasing our pyrite concentrate and gold-bearing pyrite concentrate. These customers located at seven provinces in the PRC and are mainly chemical manufacturing companies and trading companies of chemicals. We directly sold our recycled products to these customers.

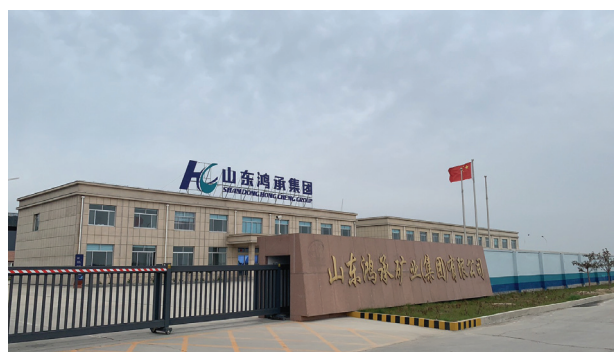
High silicon tailings

From our operation process, we also extract high silicon tailings from the gold mine hazardous wastes. High silicon tailings can be further processed for recycling to construction aggregates for concrete-mixing in construction works with relevant technological skills and machinery. According to the F&S Report, the construction aggregate market is a major downstream market of gold mine solid waste treatment market, and an important part of circular economy in the mining industry. As such, we plan to expand our recycled product offerings to construction aggregate. For details, see “— Business Strategies — 1. Increase Our Production Capacity and Capabilities to Solidify our Market Position” above.

BUSINESS

OUR PRODUCTION FACILITIES

Our two production facilities with a total site area of approximately 228,683 sq.m. are located in Laizhou city, Shandong province, the PRC. Our production facilities are located in Jincheng town and Shahe town in Laizhou city, with aggregate gross floor areas of approximately 15,407 sq.m. and 143,607 sq.m., respectively. For details, see “— Properties” below. Our production facilities comprised warehouses, production compartments, office buildings and dormitory. As at the Latest Practicable Date, our production facilities are equipped with our major production machinery and equipment, including but not limited to ore feeders, scrapers, rotary screening machine, activities tanks, flotation tanks and excavators.



Above is our production facility located in Jincheng town, Laizhou city, Shandong province, the PRC. Above is our production facility located in Shahe town, Laizhou city, Shandong province, the PRC.

Production capacity and utilisation rate

According to the Measures for the Administration of Permit for Operation of Hazardous Wastes (《危險廢物經營許可證管理辦法》) issued by the State Council (the “Measures”), companies engaging in hazardous waste collection, storage and treatment in the PRC shall obtain the Hazardous Waste Business Licence while there is an permitted annual treatment volume pursuant to such licence. In order to get the license, the relevant government authorities examine and approve the treatment facilities and equipment, as well as establish qualified rules and regulations, pollution prevention and control measures, and accident emergency rescue measures for such companies. As such, the annual production capacity of our Group was limited by our Hazardous Waste Business Licences.

As at 1 January 2018, the commencement of the Track Record Period, we possessed a Hazardous Waste Business Licence for our production facility in Jincheng town, Laizhou city with a permitted annual treatment capacity of 560,000 tonnes. In order to expand our business operation and increase our annual treatment capacity, we constructed our second production facility in Shahe town, Laizhou city, which we obtained a temporary permit with permitted treatment capacity of 300,000 tonnes to commence trial operation in October 2019. Since July 2020, we also possessed an additional Hazardous Waste Business Licence for our production facility in Shahe town, Laizhou city with a permitted annual treatment capacity of 600,000 tonnes. As at the Latest Practicable Date, the aggregate permitted annual treatment capacity of the two Hazardous Waste Business Licences

BUSINESS

possessed by our Group was 1.16 million tonnes. Our Group intends to further increase our permitted annual treatment capacity by establishing the New Production Facility. See “Business Strategies” above for further details.

The following table sets out the permitted annual treatment capacity of our two production facilities and the actual annual treatment volume during the Track Record Period:

	Year ended 31 December		
	2018	2019	2020
Production facility in Jincheng town, Laizhou city			
Permitted annual treatment capacity (<i>tonnes</i>) ⁽¹⁾	560,000	560,000	560,000
Actual annual treatment volume (<i>tonnes</i>)	560,067	592,778	530,906
Utilisation rate ⁽²⁾	100% ⁽³⁾	106% ⁽³⁾	95%
Production facility in Shahe town, Laizhou city			
Permitted annual treatment capacity (<i>tonnes</i>) ⁽¹⁾	— ⁽⁴⁾	300,000 ⁽⁴⁾	600,000 ⁽⁴⁾
Actual annual treatment volume (<i>tonnes</i>)	—	213,033	552,007
Utilisation rate ⁽²⁾	—	71%	92%

Notes:

- (1) The permitted annual treatment capacity refers to the permitted annual treatment capacity as stated in the respective Hazardous Waste Business Licence of the production facilities.
- (2) Utilisation rate is calculated by dividing the actual annual treatment volume by the permitted annual treatment capacity.
- (3) As advised by our PRC Legal Advisers, according to the Measures, the holder of Hazardous waste Business Licence shall re-apply for the licence if the hazardous wastes that it manages exceed 20% of the originally permitted annual treatment capacity. Accordingly, our Group does not need to re-apply for a new Hazardous Waste Business Licence as the actual annual treatment volume in both 2018 and 2019 of production facility in Jincheng town, Laizhou city were still within the allowed range, and our Group complied with the relevant rules and regulations.
- (4) The production facility in Shahe town, Laizhou city is operated and managed by HC Mining. HC Mining obtained a temporary permit with permitted treatment capacity of 300,000 tonnes to commence trial operation in October 2019. Subsequently in July 2020, Yantai Municipal Ecology and Environment Bureau granted HC Mining the Hazardous Waste Business Licence with the permitted annual treatment capacity of 600,000 tonnes.

BUSINESS

Our production machinery and equipment

During the Track Record Period, our production machinery and equipment were purchased in the PRC.

The table below sets forth information on our major machinery and equipment as at 31 December 2020:

Type of major machinery and equipment	Principal functions	Unit	Approximate average age (years) ⁽¹⁾	Approximate average remaining useful lives (years) ⁽²⁾
Ore feeder	Transport cyanide tailings to scrapers	2	2.6	7.4
Dissolving plant	Water is added to cyanide tailings to form a slurry	3	2.5	7.5
Rotary screening machine	Remove larger solid impurities such as sand and stones from the slurry	2	3.9	6.1
Activation tank	Provide sufficient retention time after chemical solutions and frothing agents are added to the slurry for the pyrite concentrate and gold-bearing pyrite concentrate leaching process	14	4.9	5.1
Flotation tank	Separate pyrite concentrate and gold-bearing pyrite concentrate from other materials by creating a froth which adheres to the pyrite concentrate	78	3.4	6.6

BUSINESS

Type of major machinery and equipment	Principal functions	Unit	Approximate average age (years) ⁽¹⁾	Approximate average remaining useful lives (years) ⁽²⁾
Filter press machines	Separate the solid products from liquids by drying the froth with pyrite concentrate or gold-bearing pyrite concentrate or high silicon tailings from the flotation tank	11	2.9	7.1
Excavators	Dig and move various materials at the production facilities, such as cyanide tailings, pyrite concentrates and gold-bearing pyrite concentrates	7	2.5	7.5

Notes:

- (1) The average age of the machinery and equipment is calculated based on the aggregate age of the machinery divided by the number of units of the machinery.
- (2) The remaining useful life of the machinery is calculated based on the estimated useful life deducted the average age of the machinery.

We adopt the straight line method to recognise the depreciation of our machinery and equipment. For the years ended 31 December 2018, 2019 and 2020, our capital expenditures in relation to property, plant and equipment amounted to approximately RMB16.1 million, RMB103.3 million and RMB9.3 million, respectively.

Finance lease

As at 31 December 2020, one unit of excavator was financed by finance lease arrangements between our Group and a financial institution in the PRC whereby the ownership of the excavator remain with such financial institution until the total rental set out in the lease agreement has been paid up in full and whereupon our Group has exercised or deemed to have exercised the option to purchase the relevant excavator. For the years ended 31 December 2018, 2019 and 2020, we have entered into finance lease of various machinery with financial institutions, and our interest expense on lease liabilities were approximately RMB0.1 million, RMB60,000 and RMB70,000, respectively.

BUSINESS

Repair and maintenance

We have adopted a preventive maintenance system for our machinery, including standardised inspection and maintenance procedures which require our production team to schedule regular downtime for maintenance and repairs, and regular inspection of our production machinery in order to ensure our production lines run smoothly and operate at optimal levels. Our production compartments are subject to on-going maintenance checks. Regular maintenance of our production facilities is generally performed on a monthly basis and is scheduled to rotate among different machinery and equipment to avoid complete shutdown of our operation. Moreover, our production facility in Jincheng town, Laizhou city commenced operation in 2014. In order to conduct an in-depth and comprehensive repair and maintenance for our production machinery and equipment and improve the overall production efficiency, we temporarily suspended its production operation from 13 November 2019 to 19 January 2020 so that the machinery and equipment, and principal processing processes can be repaired and maintained as a whole. During the Track Record Period, we had not experienced any material or prolonged interruption of our production processes due to machinery failure, which had significant impact on our financial conditions.

For the years ended 31 December 2018, 2019 and 2020, our total repair and maintenance costs were approximately RMB2.8 million, RMB3.4 million and RMB3.1 million, respectively.

Our warehouses

Our business activities also require certain amount of space for storage purpose. As at the Latest Practicable Date, we had gross floor area of approximately 113,000 sq.m. for our warehouses. Our warehouses are mainly used for (i) storing cyanide tailings from our upstream customers, which we will store them at our production facilities before commencement of processing procedure, (ii) storing our recycled products from the process of gold mine hazardous waste treatment as we need time to arrange transportation of the recycled products with our downstream customers, mainly collection by them at our production facilities, (iii) storing high silicon tailings as we plan to commence the recycling of these high silicon tailings to construction aggregates and some other recycled products with economic value for sale, and (iv) certain areas within our production facilities are designated and leased to LZ Assets for the storage of cyanide tailing handled by the Laizhou City Municipal Government (萊州市人民政府). For warehouses used for storing cyanide tailings, we strictly followed the Technical Specification for Pollution Control of Cyanide Tailings in Gold Industry (《黃金行業氰渣污染控制技術規範》) issued by the Ministry of Ecology and Environmental (生態環境部) for the design and construction to prevent any seepage.

Our Directors confirm that, as advised by our PRC Legal Advisers, during the Track Record Period and up to the Latest Practicable Date, the warehouses of our Group complies with the relevant applicable PRC laws and regulations in all material respects.

BUSINESS

Our rental services for storage of hazardous wastes

Certain hazardous wastes was abandoned by a chemical company in Laizhou city, Shandong province, and it was unable to arrange for the storage and treatment of these hazardous wastes. Laizhou City Municipal Government was then responsible for the safe transfer and treatment of these hazardous wastes. In October 2018, Laizhou City Municipal Government resolved to arrange a state-owned company to lease the storage facilities of HC Environmental for storing these abandoned hazardous wastes to address the urgent environmental issue. Given HC Environmental was the only company in Laizhou city, Shandong province at that time which had obtained the Hazardous Waste Business Licence issued by Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局), the management of HC Environmental considered that it was an opportunity for HC Environmental to deliver its social responsibility and therefore decided to cooperate with the Laizhou City Municipal Government.

Subsequently in the fourth quarter of 2018, HC Environmental entered into hazardous waste storage rental agreements (the “**Rental Agreements**”) with Laizhou City State-owned Assets Management Company Limited (萊州市國有資產經營有限公司) (“**LZ Assets**”), a state-owned enterprise, pursuant to which HC Environmental leased certain hazardous waste storage facilities, inclusive of two warehouses with an aggregate gross floor approximately 74,500 sq.m. and ancillary facilities such as rainwater-harvesting pools, roads and passages to LZ Assets for storage of hazardous wastes. In return, LZ Assets agreed with HC Environmental for an annual rental fee of RMB8.0 million and advanced RMB160.0 million in total to HC Environmental. Both parties agreed that the minimum term of the Agreements would be five years, with a condition that the lease term will terminate when the hazardous wastes in the warehouses are put for tender through public bidding for detoxing treatment during the five year term and HC Environmental wins the tender, which the treatment fee would then first be deducted from the remaining amount of the advanced payment. It is also stipulated in the Rental Agreements that from the sixth year since the respective signing date of the Rental Agreements, either LZ Assets or HC Environmental has the right to terminate the Rental Agreements by paying an amount equivalent to the annual rental fee, being RMB8 million as compensation, and HC Environmental will be required to repay the remaining balance of advances to LZ Assets, within three years, being 20% for the first year, 30% for the second year and full repayment in the third year, from the 30th day after the receipt of the notice of termination of the Agreements. Our Directors consider that the terms of the Agreements are normal commercial terms under arm-length negotiations.

With the consideration of the amortisation of the balance of advances, for the years ended 31 December 2018, 2019 and 2020, we recognised approximately RMB1.1 million, RMB14.5 million and RMB14.5 million from the rental services, respectively, representing approximately 1.0%, 10.8% and 7.1% of our total revenue for the same period, respectively. For further details, see Notes 5 and 30 to the historical financial information set out in the Accountant’s Report in Appendix I to this document.

BUSINESS

To the best knowledge of our Directors after making reasonable enquiries, the tendering process for the hazardous waste treatment services had not yet been commenced as at the Latest Practicable Date. In the event HC Environmental could not win the tender or LZ Assets early terminates the Agreements, our Directors consider that those storage facilities can be used for our internal storage purpose for further expansion of our Group.

Inventory Management

Our inventory comprises mainly raw materials, work-in-progress and finished goods of recycled products available for sale.

Our raw materials inventories mainly include gold mine hazardous wastes collected from customers but yet to be treated and consumables to be used in our operations such as xanthate and sodium sulphide. We continuously monitor our inventory level by conducting regular checks on quality and quantity. In addition, our production team monitors closely and formulate our procurement plan and budget. As at 31 December 2018, 2019 and 2020, our raw materials inventories amounted to approximately RMB0.9 million, RMB2.0 million and RMB2.6 million, respectively.

We generally produce recycled products on a continuous basis as our utilisation rates on the permitted annual treatment capacity of hazardous wastes were close to fully utilised. We stored the finished goods in our warehouses pending for sales to our downstream customers. As at 31 December 2018, 2019 and 2020, our finished goods amounted to approximately RMB3.1 million, RMB13.8 million and RMB20.1 million, respectively.

There is no material obsolete stock in our Group’s inventory due to the characteristic of the raw materials and products. For further analysis of our inventories during the Track Record Period, see “Financial Information — Description of Certain Items of Combined Statements of Financial Position — Inventories” in this document.

CUSTOMERS

Our customers for the gold mine hazardous waste treatment services are mainly gold smelting companies under gold mining companies with mine operations in Shandong province while our customers for the sale of recycled products are mainly chemical manufacturing companies and trading companies of chemicals in the PRC. For the years ended 31 December 2018, 2019 and 2020, our five largest customers accounted for approximately 69.8%, 67.3% and 71.8% of our total revenue, respectively. During the same periods, our largest customer accounted for approximately 22.6%, 21.4% and 27.3% of our total revenue, respectively.

During the Track Record Period, we had eight upstream customers who have engaged our Group for the gold mine hazardous waste treatment services, and over 40 downstream customers who have purchased recycled products from our Group.

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BUSINESS

Our five largest customers

The following table sets forth the details of our five largest customers for the years ended 31 December 2018, 2019 and 2020:

For the year ended 31 December 2018

Rank	Customer	Year of commencement of business relationship	Principal service provided/product sold	Approximate amount of revenue <i>RMB' 000</i>	Approximate percentage of our total revenue %	Credit term(s)	Settlement method(s)
1	Zhongkuang Gold	2014	Gold mine hazardous waste treatment services	23,136	22.6	Within 30 days	Bank transfer
2	Qinhuangdao Hefengxiang Chemical Co., Ltd. (秦皇島鶴鳳翔化工有限公司) (“Qinhuangdao Hefengxiang”) ⁽²⁾	2015	Sale of recycled products	18,060	17.7	Within 60 days	Bank transfer/ bank acceptance notes
3	Shandong Gold Smelting ⁽³⁾	2017	Gold mine hazardous waste treatment services	15,049	14.7	Within 60 days	Bank transfer
4	Shandong Lianmeng Phosphate & Compound Fertilizers Co., Ltd. (山東聯盟磷複肥有限公司) (“Shandong Lianmeng”) ⁽⁴⁾	2014	Sale of recycled products	10,245	10.0	Within 60 days	Bank transfer/ bank acceptance notes
5	Customer A ⁽⁵⁾	2017	Sale of recycled products	4,903	4.8	Within 60 days	Bank acceptance notes
				<u>71,393</u>	<u>69.8</u>		

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BUSINESS

For the year ended 31 December 2019

Rank	Customer	Year of commencement of business relationship	Principal service provided/product sold	Approximate amount of revenue <i>RMB' 000</i>	Approximate percentage of our total revenue %	Credit term(s)	Settlement method(s)
1	Shandong Gold Smelting ⁽³⁾	2017	Gold mine hazardous waste treatment services	28,569	21.4	Within 60 days	Bank transfer
2	Zhongkuang Gold ⁽¹⁾	2014	Gold mine hazardous waste treatment services	20,566	15.4	Within 30 days	Bank transfer
3	Shandong Lianmeng ⁽⁴⁾	2014	Sale of recycled products	17,021	12.7	Within 60 days	Bank transfer
4	LZ Assets ⁽⁶⁾	2018	Storage of hazardous waste rental services	14,490	10.8	Payment in advance	Bank transfer
5	Zhaoyuan Hexi Gold Mine (招遠市河西金礦) ⁽⁷⁾	2017	Gold mine hazardous waste treatment services	9,369	7.0	Within 30 days	Bank transfer/ bank acceptance notes
				90,015	67.3		

BUSINESS

For the year ended 31 December 2020

Rank	Customer	Year of commencement of business relationship	Principal service provided/product sold	Approximate amount of revenue <i>RMB' 000</i>	Approximate percentage of our total revenue %	Credit term(s)	Settlement method(s)
1	Shandong Gold Smelting ⁽³⁾	2017	Gold mine hazardous waste treatment services	56,074	27.3	Within 60 days	Bank transfer
2	Zhongkuang Gold ⁽¹⁾	2014	Gold mine hazardous waste treatment services	34,822	17.0	Within 30 days	Bank transfer
3	Shandong Lianmeng ⁽⁴⁾	2014	Sales of recycled products	20,852	10.2	Within 60 days	Bank transfer
4	Qinhuangdao Hefengxiang ⁽²⁾	2015	Sales of recycled products	20,409	9.9	Within 60 days	Bank transfer
5	Customer B ⁽⁸⁾	2019	Sales of recycled products	15,314	7.4	Within 60 days	Bank transfer/ bank acceptance notes
				<u>147,471</u>	<u>71.8</u>		

Notes:

- (1) Zhongkuang Gold is a subsidiary of a Chinese state-owned enterprise, mainly engaged in gold production business in the PRC.
- (2) Qinhuangdao Hefengxiang is a privately-owned PRC company, which is located in Qinghuangdao city, Hebei province, mainly engaged in the production and sale of chemical products in the PRC with over 100 employees.
- (3) Shandong Gold Smelting is a subsidiary of a PRC company namely Shandong Gold Mining Co., Ltd. whose shares are listed on the Hong Kong Stock Exchange (stock code: 1787) and Shanghai Stock Exchange (stock code: 600547), mainly engaged in precious metal smelting business in the PRC.
- (4) Shandong Lianmeng is a privately-owned PRC company, which is located in Shouguang city, Shandong province, mainly engaged in the production of chemical fertilizers in the PRC with over 700 employees.
- (5) Customer A is a privately-owned PRC company, which is located in Xinxiang city, Henan province, mainly engaged in the trading of chemical products in the PRC.
- (6) LZ Assets is a Chinese state-owned enterprise, which is located in Laizhou city, Shandong province, mainly engaged in the investment and operation of state-owned assets in the PRC.
- (7) Zhaoyuan Hexi Gold Mine is a collectively-owned PRC enterprise, which is located in Laizhou city, Shandong province, mainly engaged in gold mining and processing in the PRC with over 600 employees.
- (8) Customer B is a privately-owned PRC company, which is located in Xintai city, Shandong province, mainly engaged in the trading of coal, steel pipe and pyrite concentrate in the PRC.

BUSINESS

None of our Directors or their close associates, or any Shareholders, who, (to the best knowledge of our Directors) are beneficially interested in 5% or more of the issued share capital of our the Company, have had any interest in any of our five largest customers during the Track Record Period. All of the five largest customers during the Track Record Period are Independent Third Parties. During the Track Record Period and up to the Latest Practicable Date, there were no litigations or arbitration or disputes between us and our major customers which have a material and adverse impact on our business operation or financial condition.

Major contract terms with our customers

The terms of each contract entered into between us and our customers may vary, but the salient terms of a typical contract for each of our business segments are as follows.

Salient terms of service contracts for gold mine hazardous waste treatment services

- ***Scope of work.*** gold mine hazardous waste treatment services provided by us.
- ***Duration of service.*** The term of our service contracts varies depending on commercial negotiations with each customer, generally ranging from three to 12 months and with option of renewal, based on negotiation with our customers.
- ***Fee and payment terms.*** Our fees are determined based on the type and volume of the gold mine hazardous wastes we treat and payable by our customers upon their receipt of our invoices. In general, our fees are calculated based on a fixed fee per tonne and the actual amount of waste we receive from the customer per month pursuant to the service contracts.
- ***Logistic arrangement.*** Generally, our customers are responsible for loading the gold mine hazardous wastes that they request us to treat. We are responsible for collecting the gold mine hazardous wastes from our customers directly upon notice from our customers. We typically engage transportation companies to collect the gold mine hazardous wastes from our customers to our production facilities. The transportation companies are liable for any leakage or pollution during the course of transportation.
- ***Environmental protection.*** We are responsible for overseeing the gold mine hazardous waste treatment process is in compliance with relevant environmental protection laws and regulations of the PRC.
- ***Jurisdiction.*** The contract shall be governed by the PRC laws. Any disputes between our Group and the customer shall firstly be resolved through negotiations, failure of which, the parties may resort to litigation proceedings.

BUSINESS

Salient terms of sales contracts for recycled products

- **Product type.** Product type and specification are stipulated in the contracts. For example, our sales contracts generally stipulate the minimum percentage of sulphur and iron and the maximum percentage of water in the pyrite concentrate and/or gold-bearing pyrite concentrate as agreed by both parties.
- **Quantity.** We generally agreed with the customers and stipulate a fixed quantity of purchase.
- **Price.** Our fees are calculated based on recycled products per tonne and the actual amount purchased from the customer pursuant to the respective sales contracts.
- **Quality and acceptance.** Our sales contracts stipulate certain recycled products standards agreed by both parties to measure the quality of the products. Both parties have the right to sample and assess the quality of the products.
- **Logistic arrangement.** Our customers generally pick up the products at our production facilities. The customers can deploy representative to witness the loading process of the recycled products at our production facilities and they are responsible for the transportation costs.
- **Payment terms.** Payment generally shall be made before the recycled products are delivered to the customer.
- **Jurisdiction.** The sales contract shall be governed by the PRC laws. Any disputes between our Group and the customer shall firstly be resolved through negotiations, failure of which, the parties may resort to litigation proceedings.

Pricing policy

For our gold mine hazardous waste treatment services, we adopt a cost-plus model where we determine the treatment fee by taking into account various factors such as the grading and type of the gold mine hazardous waste to be treated, the estimated transportation costs, customer relationships, competitive landscape, market circumstances and our business strategies adopted from time to time.

Our recycled products are generally not subject to any price control or regulations by the PRC governmental authorities. Generally, we adopt a cost-plus model where we determine the price of our recycled products by taking into account various factors such as the cost of raw materials, transportation costs, customer relationships, competitive landscape, market circumstances (including the prevailing market price of sulphur, iron and sulphuric acid) and our business strategies adopted from time to time.

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Credit policy

We generally negotiate credit terms with our customers on a case-by-case basis. While credit payment terms are not granted to some of our customers, our Directors confirmed that our Group generally grants certain credit terms to customers after taking into account various factors including the years of business relationships and credit profiles of our customers. As at 31 December 2018, 2019 and 2020, our net trade and other receivables amounted to approximately RMB18.9 million, RMB0.3 million and RMB22.8 million, respectively, while our average trade receivables turnover days were approximately 75.4 days, 26.3 days and 20.6 days, respectively. See “Financial Information — Description of Certain Items of Combined Statements of Financial Position — Trade receivables” in this document for further details of our trade receivables. Please also refer to Note 3.1(b) to the historical financial information in the Accountant’s Report set out in Appendix I to this document for further details of our credit risks.

SALES AND MARKETING

During the Track Record Period, we have been putting efforts in enhancing enhance visibility in the industry, in order to explore new business opportunities, maintain our relationship with our customers and potential customers, and to keep up with the relevant development trends of our industry.

In regards to our gold mine hazardous waste treatment service business, as our customer base is relatively stable, we mainly focus on maintaining good customer relationship to ensure our existing customers continue to engage us for gold mine hazardous waste treatment services. In regards to our sale of recycled products business, we generally promote our products by participating in various industry marketing events of different business associations in order to further explore new business opportunities and to allow our staff to be informed of the relevant industry developments.

As at the Latest Practicable Date, we have two employees responsible for sales and marketing of our products and services. Our sales managers are primarily responsible for exploring new business opportunities, securing new contracts, maintaining customer relationships and market development.

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PURCHASES OF SERVICES AND GOODS

During the Track Record Period, suppliers of goods and services to our Group mainly included: (i) transportation companies, (ii) suppliers of consumables such as xanthate and sodium sulphide, (iii) supplier of electricity and water, and (iv) suppliers for other services such as laboratory testing. For details of the breakdown of our costs of sales during the Track Record Period, see “Financial information — Description of Selected Items in the Combined Statements of Comprehensive Income — Costs of Sale” in this document.

All of our suppliers during the Track Record Period were located in the PRC. Our Directors believe that a stable supply of our major consumables and transportation services can be secured. Our Directors also believe that the fluctuation of the prices of transportation services and consumables during the Track Record Period was influenced by a number of factors, including regulations and policies of the PRC government, and the supply of and demand for such services and consumables in the PRC. For details relating to the impact on the price fluctuations in our cost of sales, see “Financial Information — Key Factors Affecting our Results of Operations — Transportation Costs and Price of Consumables” in this document. To manage such price fluctuation, we would adjust the selling prices of our products and our treatment fees from time to time according to the movements in our costs of sale with a view to pass the additional costs to our customers to an extent that is commercially practicable.

For the years ended 31 December 2018, 2019 and 2020, three, two and two of our five largest suppliers had commenced business relationship with us for five years or more, respectively. Our suppliers generally grant us a credit period of 30 to 90 days. During the Track Record Period, we settled payments with our suppliers in RMB mainly by bank transfer and bank acceptance notes. We adopt strict procedures in selecting our suppliers. We review their background information, including their scale of operation, quality control system, prices, financial position and reputation in the industry. We maintain a list of approved suppliers which a supplier will become our approved supplier only after they have met our selection criteria. We also conduct evaluation of our approved suppliers from time to time, which include the stability and schedule of supply, their production facilities (if applicable) and the quality control system. During the Track Record Period, we had not experienced any material return of consumables or in dispute with our suppliers, nor any disruption, shortage or delay in the supply of consumables and services, which may materially and adversely affect our operations and financial conditions.

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Our five largest suppliers

For the years ended 31 December 2018, 2019 and 2020, our five largest suppliers accounted for approximately 50.2%, 66.2% and 54.1% of our total cost of sales, respectively. During the same periods, our largest supplier accounted for approximately 18.1%, 25.3% and 18.9% of our total cost of sales, respectively.

The tables below set forth a summary of our five largest suppliers for the years ended 31 December 2018, 2019 and 2020:

For the year ended 31 December 2018

Rank	Supplier	Year of commencement of business relationship	Principal goods/services purchased	Approximate amount of purchase RMB' 000	Approximate percentage of our total cost of sales %	Credit term(s)	Settlement method(s)
1	Supplier A ⁽¹⁾	2016	Transportation services	8,049	18.1	Within 90 days	Bank acceptance notes
2	Laizhou Electricity Generating Company of State Grid Shandong Electric Power Company (國網山東省電力公司萊州市供電公司) (“Laizhou Electricity Generating Company”) ⁽²⁾	2016	Electricity supply	4,837	10.9	Payment in advance	Bank transfer
3	Supplier B ⁽³⁾	2017	Transportation services	3,496	7.8	Within 90 days	Bank acceptance notes
4	Supplier C ⁽⁴⁾	2015	Transportation services	3,418	7.7	Within 90 days	Bank acceptance notes
5	Supplier D ⁽⁵⁾	2018	Transportation services	2,542	5.7	Within 90 days	Bank acceptance notes
				22,342	50.2		

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For the year ended 31 December 2019

Rank	Supplier	Year of commencement of business relationship	Principal goods/services purchased	Approximate amount of purchase <i>RMB' 000</i>	Approximate percentage of our total cost of sales %	Credit term(s)	Settlement method(s)
1	Supplier D ⁽⁵⁾	2018	Transportation services	13,013	25.3	Within 90 days	Bank acceptance notes
2	Supplier C ⁽⁴⁾	2015	Transportation services	10,373	20.1	Within 90 days	Bank acceptance notes
3	Supplier E ⁽⁶⁾	2019	Transportation services	3,868	7.5	Within 90 days	Bank acceptance notes
4	Laizhou Electricity Generating Company	2016	Electricity supply	3,708	7.2	Payment in advance	Bank transfer
5	Supplier F ⁽⁷⁾	2019	Transportation services	3,138	6.1	Within 90 days	Bank transfer
				34,100	66.2		

For the year ended 31 December 2020

Rank	Supplier	Year of commencement of business relationship	Principal goods/services purchased	Approximate amount of purchase <i>RMB' 000</i>	Approximate percentage of our total cost of sales %	Credit term(s)	Settlement method(s)
1	Supplier D ⁽⁵⁾	2018	Transportation services	15,436	18.9	Within 90 days	Bank transfer/ bank acceptance notes
2	Supplier C ⁽⁴⁾	2015	Transportation services	12,899	15.8	Within 90 days	Bank transfer
3	Supplier G ⁽⁸⁾	2019	Electricity and water supply	7,288	8.9	Within 30 days	Bank transfer
4	Laizhou Electricity Generating Company ⁽²⁾	2016	Electricity supply	5,443	6.7	Payment in advance	Bank transfer
5	Supplier E ⁽⁶⁾	2019	Transportation services	3,065	3.8	Within 90 days	Bank transfer
				44,131	54.1		

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Notes:

- (1) Supplier A is a privately-owned PRC company, which is located in Yantai city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (2) Laizhou Electricity Generating Company is a branch institution of a collectively-owned PRC enterprise, which is located in Laizhou city, Shandong province, mainly engaged in power supply in the PRC.
- (3) Supplier B is a privately-owned PRC company, which is located in Laiyang city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (4) Supplier C is a privately-owned PRC company, which is located in Zhaoyuan city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (5) Supplier D is a privately-owned PRC company, which is located in Zhaoyuan city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (6) Supplier E is a privately-owned PRC company, which is located in Laizhou city, Shandong province, mainly engaged in road transportation services for goods in the PRC.
- (7) Supplier F is a privately-owned PRC company, which was located in Laizhou city, Shandong province, mainly engaged in road transportation services for goods in the PRC. It was deregistered on 15 June 2020.
- (8) Supplier G is a privately-owned PRC company, which is located in Laizhou city, Shandong province, mainly engaged in the production of industrial salt in the PRC. It is also engaged in the supply of water and electricity.

None of our Directors or their close associates, or any, Shareholders who (to the best knowledge of our Directors are beneficially interested in 5% or more of the issued share capital of our Company) or their respective close associates had any interest in any of our five largest suppliers during the Track Record Period. All of the five largest suppliers are Independent Third Parties. During the Track Record Period and up to the Latest Practicable Date, our Group had not experienced any major disruption in business due to material delays or defaulting payments.

Major contract terms with our suppliers

During the Track Record Period and up to the Latest Practicable Date, we generally enter into framework agreements which do not have any minimum purchase or procurement commitment with a contract term ranging from five to 12 months with our suppliers for purchase of consumables and transportation companies for transportation services, whereas the terms and conditions of an individual transaction (such as quantity and delivery schedule) will be set out in the relevant purchase order of the transaction. Our Directors consider it is in line with normal practice in the industry. Set out below is a summary of typical key terms of our purchase contracts with suppliers:

Transportation services

Terms or duration. We generally enter into a one-year framework agreement with the suppliers provide transportation services.

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Obligations. The suppliers provide transportation services with their own vehicles. Suppliers should follow instructions from us including the delivery date and time, delivery method and delivery route (if any), to deliver the goods or products to places designated by us. Suppliers cannot subcontract the transportation services to any third parties without our prior consent.

Price and payment terms. Parties agree to follow the prevailing market price at the time of purchase order. There is no minimum annual transaction amount required pursuant to the framework agreements. Suppliers should issue an invoice to us at the end of each month in respect of the services they rendered in that month for settlement.

Purchase of consumables

Product type. Description and specification of the consumables are specified in the framework agreements.

Contract period. We generally enter into framework agreements which do not have any minimum purchase commitment with the suppliers of raw materials and consumables with a contract term ranging from five to 12 months or a framework agreement does not contain any standard fixed duration.

Price. In general, unit price of the consumables are not stated in the framework agreements. Instead, parties agree to follow the prevailing market price at the time of purchase order. There is no minimum annual transaction amount required pursuant to the framework agreements.

Delivery. Delivery method are specified in the contract and we generally required the suppliers to be responsible for the transportation costs.

Payment terms. Payment terms are subject to negotiation with suppliers. For some of the suppliers, the amounts payable by us shall be settled on a monthly basis while some of the suppliers require payment upon delivery or grant us a credit period of 30 days.

Logistics and Transportation

Our upstream customers are typically responsible for sorting and packaging the gold mine hazardous waste that they request us to treat. We are typically required to designate transportation companies for gold mine hazardous waste transportation to transport the gold mine hazardous waste from the location of our upstream customers to our production facilities. The transportation companies are liable for any leakage or pollution during the course of transportation. We collect gold mine hazardous waste from our upstream customers upon their notices. In general, our downstream customers do not request us to deliver our recycled products from our production facilities to their designated location. Further, we also engage transportation companies to assist us on the transportation within our production facilities for our daily operation needs including the transition of high silicon tailings and flipping and airing of gold mine hazardous wastes in our production facilities before further processing procedures.

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Our logistic arrangements with third-party transportation companies allow us to devote less capital investment than we would have to devote to developing and maintaining our own large-scale logistics system. Outsourcing the transportation services also allows us to transfer most of the risks relating to transportation of gold mine hazardous wastes to them. During the Track Record Period and as at the Latest Practicable Date, we had not experienced any significant delay in logistics that would materially and adversely affect our business operations and we did not encounter any shortage of supply of transportation services. Furthermore, the current market for provision of transportation services provides us with sufficient alternative options of transportation companies who could offer similar terms as our existing transportation companies.

OVERLAPPING OF MAJOR CUSTOMER AND SUPPLIER

Based on our experience in the gold mine solid waste and hazardous waste treatment market in the PRC and also according to the F&S Report, our Directors note that it is normal practice that gold mine hazardous waste treatment companies purchase consumables from gold mining and production companies in the PRC. However, it is not our common practice to purchase from our customers or sell to our suppliers.

During the Track Record Period, among our five largest customers, Shandong Gold Smelting is our overlapping customer and supplier. To the best knowledge and belief of our Directors, Shandong Gold Smelting and its ultimate beneficial owner are Independent Third Parties.

For the years ended 31 December 2018, 2019 and 2020, we provided gold mine hazardous waste treatment services to Shandong Gold Smelting while we also purchased consumables, namely gold-bearing mineral powder, from Shandong Gold Smelting for the trial use as an agent during the flotation process. Our Directors confirm that all of our sales to and purchases from Shandong Gold Smelting were incidental transactions, which were not inter-conditional, inter-related or otherwise considered as one transaction.

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The table below sets out the total sales and total purchases attributable to/from Shandong Gold Smelting for the years indicated:

	Years ended 31 December		
	2018	2019	2020
Sales			
Revenue (<i>RMB'000</i>)	15,049	28,569	56,074
As a percentage of our total revenue	14.7%	21.4%	27.3%
Related cost (<i>RMB'000</i>)	7,077	8,838	20,218
Gross profit margin	53.0%	69.1%	63.9%
Purchases			
Cost (<i>RMB'000</i>)	571	28	180
As a percentage of our total amount of purchase	1.8%	0.1%	0.3%

Our Directors are of the view that there are no unusual benefits to our Group or the overlapping customer and supplier other than the profit and loss derived from the arm's length transaction with the overlapping customer and supplier as disclosed above.

SEASONALITY

Our Directors consider that there is no material seasonal fluctuations of the business of our Group.

RESEARCH AND DEVELOPMENT

Our research and development efforts primarily focus on expanding our product offerings, upgrading our technologies on comprehensive utilisation and harmless treatment of gold mine hazardous wastes processing and developing new methods. We continue and further explore our technological advantage by means of various research and development projects ourselves, invite external industry experts to review of specific issues as the case may require and technological exchange and cooperation with university research and development centre.

We developed strong collaborations with renowned universities, such as Shandong University (山東大學), and scientific research institutes, such as Regional Resources and Environmental Development Research Institute of Shandong Province (山東省區域資源與環境發展研究院), in the PRC on research and development of technology for comprehensive utilisation of gold mine hazardous wastes. We also conducted an electric furnace smelting research with Chaoyang NEU Minerals and Metallurgy Institute (朝陽東

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大礦業研究院) in 2020 for gold tailings processing technology. We have also set up HC R&D with the intention to further enhance our technologies in producing high-quality recycled products. By relying on our technical advantages and ability to efficiently materialise comprehensive utilisation of gold mine hazardous wastes, as at the Latest Practicable Date, we had registered or obtained governmental approvals of three patents in the PRC relation to the invention of a device for dust isolation and recovery in the conveyor belt of gold tailings, a pump-mixing pipeline dosing device for the integrated utilisation of gold cyanide tailings and a side device installed at flotation machines for dust removal, and we are in the progress of applying for over 30 patents in the PRC, including both invention and utility model, such as a device for removing harmful impurities before flotation of high-grade sulphur concentrates from cyanide tailings, a comprehensive utilisation and harmless treatment of cyanide tailings and a device for pre-treatment of gold mine tailings. Since January 2021, we have also entered into legally-binding agreements with an aggregate amount of approximately RMB1.5 million with third-party organisations to develop a new production line or provide consultancy services to our Group on research and development. Pursuant to the terms of the collaborations, we shall fund the research and development expenses. Depending on the terms of individual agreements, the intellectual property rights of the research and development outcomes shall be owned either solely by us or jointly by us and our research partners.

Our research and development team comprises five members and three of them received tertiary education including Mr. Sheng, our executive Director and chief technical officer of our Company, who has more than 29 years of experience in chemical related industry and the qualification of intermediate engineer from Yantai Chemical Engineering and Technical Evaluation Committee. For details on the experience and qualifications of Mr. Sheng, see “Directors and Senior Management” in this document. The team mainly conducts research on technologies on gold mine hazardous waste treatment and recycled products development. Our research and development expenses incurred during the years ended 31 December 2018, 2019 and 2020 were approximately RMB2,400, RMB0.2 million and RMB1.6 million, respectively.

QUALITY ASSURANCE

Our Directors believe that high quality and standards are crucial to our Group’s success. HC Environmental, one of our major operating subsidiary, has obtained the accreditation of ISO 9000 since October 2018. The application for ISO 9001 certification was initiated by us to maintain a well-established quality management system for our Group. The major objective for adopting ISO 9001 is to demonstrate our ability to consistently provide quality services to our customers and we aim to enhance customer satisfaction through effective application of the quality management system. We have a quality control team who directly reports to our executive Directors. For qualification and experience of our Directors, see “Directors and Senior Management” in this document. The quality control team is responsible for the quality assurance of our recycled products, including the formulation of quality standards and control. Our Group’s recycled products have undergone internal production control, quality assurance control and rigorous testing.

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We are dedicated to ensuring the high standard of safety and quality of (i) the recycled products extracted by us, (ii) the consumables used for our production of recycled products procured from our suppliers, and (iii) suppliers of services for our core business activities, such as transportation companies.

We have adopted a stringent quality and management control system which oversees the entire treatment and production process as in order to ensure the quality of our products is up to standard. Our quality control procedures are performed continuously at various stages of our processing and storage to ensure the quality of our products. We have internal rules governing work procedures for various stages of operations and works performed by us, such as outlining the responsibilities of personnel of different levels, setting up general procedures for planning, management, repair and maintenance, accident reporting, communications with customers, procurement of goods and service, to ensure our operations are carried out in a safe and timely manner to the satisfaction of our customers.

During the Track Record Period and up to the Latest Practicable Date, we had not received any material complaint or request for any kind of compensation from our customers due to or in relation to the quality of the recycled products sold by us and the services provided by us.

MARKET AND COMPETITION

According to the F&S Report, the gold mine hazardous waste treatment market in the PRC and Shandong province is concentrated. In 2020, the top five market participants in the PRC took up a market share of approximately 67.3% in terms of revenue, and we are ranked the third in terms of revenue representing a market share of approximately 10.0%. Due to its rich gold resources and mature gold mining industry chain, the gold mine production in Shandong province reached approximately 58.7 tonnes in 2019, ranking the first in the PRC and accounting for approximately 18.7% of the total gold mine production in the PRC. The gold mine production in Shandong province is expected to continue to rank the first in the PRC in 2020. Laizhou city, Shandong province is also rich in natural resources, among which its gold reserves is ranked first with proven gold reserves of around 2,100 tonnes among the county-level cities in the PRC. The distribution of gold mine hazardous waste treatment company follows the gold producers and has a strong regional characteristics. As a gold mine hazardous waste treatment company located in Laizhou city, Shandong province, according to the F&S Report, we are ranked first in gold mine hazardous waste treatment volume in Shandong province and the PRC, with treatment volume of approximately 1.08 million tonnes, accounting for approximately 25.8% and 17.6% of the total treatment volume in Shandong province and the PRC, respectively, in 2020.

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According to the F&S Report, considering that cyanide leaching residue was listed in Directory of National Hazardous Wastes (國家危廢名錄) issued by the Ministry of Ecology and Environment (生態環境部) on 1 August 2016, the gold mine hazardous waste treatment market was relatively small due to the lack of attention before 2017. According to the F&S Report, the increasingly strict requirements on environmental protection drive the growth of the market after the implementation of policies, with the total revenue increasing at a CAGR of approximately 78.5% in the PRC and 85.0% in Shandong province, respectively from 2015 to 2020. The respective revenue of gold mine hazardous waste treatment market in China and in Shandong province are expected to grow at a CAGR of approximately 19.1% and 17.8%, respectively from 2020 to 2025.

The gold mine hazardous waste treatment market has a high entry barrier for potential market players. According to the F&S Report, companies engaged in gold mine hazardous waste collection, storage and treatment in the PRC shall obtain hazardous waste business licences. In order to get the licence, a company must own qualified transportation, packaging, storage, and treatment facilities and equipment, as well as establish qualified rules and regulations, pollution prevention and control measures, and accident emergency rescue measures. It takes time and efforts to get familiar with the requirements and eventually meet all the required standards for new entrants of the mine solid waste treatment market in the PRC. Moreover, mine solid waste treatment business in China requires experts in chemistry, mechanics, environmental engineering design and other industries. It is also a highly specialised industry, which has a high requirement on the technology capability of companies in the industry and requires years of technology accumulation to formulate a whole set of efficient, energy-saving and environmentally-friendly gold mine hazardous waste treatment technology system. High equipment and land expenditure and daily maintenance by technical personnel are also required to ensure the production and environmental protection requirements are met, are also required by this industry according to the F&S Report, which requires massive amount of capital investment and will bring heavy financial burden to start-ups, especially to small and medium ones. See “Industry Overview” in this document for an analysis of the PRC’s hazardous waste treatment market.

We believe that we are well-positioned to compete with other market players, and that our strengths and strategies will differentiate us from our competitors. See “— Competitive Strengths” above for a discussion of our competitive strengths.

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LICENCES AND PERMITS

According to the relevant PRC laws and regulations, we are required to obtain certain licences, approvals and permits for our business operation. As confirmed by our Directors and as advised by our PRC Legal Advisers, (i) we have obtained all material licences, approvals and permits required in the course of our business operation during the Track Record Period and up to the Latest Practicable Date, (ii) all such licences, approvals and permits remain valid as at the Latest Practicable Date, and (iii) there were no major legal obstacles for us to continue to hold such licences, approvals and permits as at the Latest Practicable Date.

Our Group is required to obtain the following key licences and permits to carry out our business and operation:

Licence/permit	Licence/ permit holder	Issuing Authority	Expiry date
Hazardous Waste Business Licence ⁽¹⁾	HC Mining	Yantai Municipal Ecology and Environment Bureau	20 July 2025
Hazardous Waste Business Licence ⁽²⁾	HC Environmental	Yantai Municipal Ecology and Environment Bureau	9 March 2025

Notes:

- (1) The permitted annual treatment capacity is 600,000 tonnes.
- (2) The permitted annual treatment capacity is 560,000 tonnes.

The aforesaid licences are subject to renewal for every five years. As such, we will renew all existing licences, approvals and permits before their expiry. Our Directors confirm that there were no foreseeable major obstacles for us to renew such licences, approvals and permits as at the Latest Practicable Date.

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AWARDS AND CERTIFICATES

After years of development, our operations have accomplished a number of milestones and we have obtained a number of awards and certificates, a summary of which is set out below:

Awards/Certificates	Award/Issuing Organisation	Recipient	Date of Issue	Expiry Date
Environmental management system accreditation (ISO 14001)	Shandong Seatone Certification Co., Ltd. (currently known as Shandong Seatone International Certification Co. Ltd.) (“Seatone”)	HC Environmental	29 October 2018	28 October 2021 (Note)
Occupational health and safety management system accreditation (OHS MS45001)	Seatone	HC Environmental	29 October 2018	28 October 2021 (Note)
Quality management system accreditation (ISO 9001)	Seatone	HC Environmental	29 October 2018	28 October 2021 (Note)
Enterprise Progress Award (企業進步獎)	Laizhou City Municipal Government	HC Environmental	February 2019	Not applicable
Advanced Unit for Comprehensive Utilisation of Resources in Shandong Province (山東省資源綜合利用先進單位)	People’s Government of Shandong Province	HC Mining	25 December 2019	Not applicable
Executive Director of Units (常務理事單位)	All-China Environment Federation (中華環保聯合會)	HC Mining	September 2020	September 2025
2020 Shandong Top Ten Innovation Achievements Award of Circular Economy (2020年度山東省循環經濟十大創新成果獎)	Shandong Provincial Circular Economy Association (山東省循環經濟協會)	HC Mining	December 2020	Not applicable

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Note: Each of ISO 9001, ISO 14001, and OHSMS 45001 certification currently carry a duration of three years, within which period surveillance audit is conducted by the certification body every year to review the implementation of the relevant systems for compliance. After this three year period, each of the ISO 9001, ISO 14001, OHSMS 45001 certification are to be further certified subject to successful implementation of a renewal audit by the certification body.

EMPLOYEES

As at the Latest Practicable Date, we had 181 full-time employees who were directly employed by us. The table below sets out a breakdown of our employees by department as at the Latest Practicable Date:

Department	Total number of employees
Management	3
Production	91
Quality control, research and development and engineering	14
Procurement, Sales and Marketing	5
Finance, human resources and administration	52
Logistics	16
Total	181

The remuneration packages for our employees include salary, bonuses and allowances. As required by the PRC regulations, we participate in social insurance schemes operated by the relevant local government authorities and maintain mandatory pension contribution plans, medical insurance, work-related injury insurance, unemployment insurance and maternity insurance for some of our employees. We also contribute to housing accumulation funds for some of our employees.

We are committed to recruiting, training and retaining skilled and experienced people throughout our operations. When we make hiring decisions, we take into account factors such as our business strategies, our development plans, industry trends and the competitive environment. We recruit our employees based on a number of factors such as their work experience, educational background and vacancy needs. We endeavour to attract and retain appropriate and suitable personnel to serve our Group.

We provide continuing education and training programmes to our employees to improve their skills and develop their potential. We also adopt evaluation programmes through which our employees can receive feedback. We foster strong employee relations by offering various staff benefits and personal development support. Our Directors considered that our Group have maintained good relationship with our employees. During the Track Record Period and up to the Latest Practicable Date, we had not experienced any material difficulties in the recruitment or any disruption to our operations due to labour disputes or claims.

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ENVIRONMENTAL PROTECTION

We are subject to the PRC national and local environmental laws and regulations, including but not limited to the Environmental Protection Law of the PRC (《中華人民共和國環境保護法》), Law of the PRC on the Prevention and Control of Environment Pollution Caused by Solid Wastes (《中華人民共和國固體廢物污染環境防治法》), the Law of the PRC on Prevention and Control of Atmospheric Pollution (《中華人民共和國大氣污染防治法》) and the Law of the PRC on the Prevention and Control of Water Pollution (《中華人民共和國水污染防治法》). For details, see “Regulatory Overview — PRC Laws and Regulations Relating to Environmental Protection” in this document. The hazardous waste treatment business is highly regulated in China. Failure to comply with applicable PRC environmental protection laws and regulations may result in significant consequences, including administrative, civil and criminal penalties, liability for damages and negative publicity. Further, such failure to comply, or allege on failure to comply, with the relevant PRC laws, regulations or government policies on environmental protection, may lead to costly litigation or penalty imposed by the relevant judicial or governmental authorities.

We emphasise on environmental protection and strive to minimise the environmental impact brought by our business operations. We have adopted and implemented various environmental protection policies and measures to ensure compliance with all relevant regulatory requirements under applicable PRC laws and regulations. We have promulgated various internal policies on environmental compliance matters, and have been supervising and managing our project companies to ensure that they operate in compliance with relevant environmental laws and regulations. Such policies regulate different aspects of our operations, from the design and construction to the operation of our hazardous waste treatment facilities. In October 2018, HC Environmental was granted the Environmental Management System (ISO 14001) certificate. Our environmental protection measures primarily include:

1. **dust.** Using water sprinkling equipment to sprinkle water on gold mine hazardous wastes, raw materials and recycled products regularly to maintain a certain surface humidity to avoid dust.
2. **wastewater.** During production process, production facilities are equipped with production circulation pools which all polluted waster generated during the production process can be recycled and not discharged.
3. **domestic sewage.** Domestic sewage are treated by the integrated sewage treatment station in the production facilities and then be used for greening and dust reduction within the production facilities without discharge.
4. **noise.** Nosing producing machinery is arranged indoors and away from boundary of the production facilities to minimise the impact of noise on the surrounding environment. Further, we set up sound insulation hold for high-noise machinery to inhibit the noise generated by mechanical vibration from spreading and sound insulation doors and windows for production compartments.

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Our Directors confirm that, during the Track Record Period and up to the Latest Practicable Date, our operations had not been subject to any pending administrative penalties in relation to environmental laws and regulations of the PRC, which would have a material adverse effect on our business, financial condition and results of operations. For the three years ended 31 December 2018, 2019 and 2020, our costs of compliance with applicable environmental laws and regulations was approximately RMB0.3 million, RMB0.5 million and RMB0.5 million, respectively. These costs were mainly attributable to testing fees, and consultancy fee in relation to environmental compliance and they did not include historical capital expenditure on property, plant and equipment that may be attributable to environmental compliance.

During the Track Record Period and up to the Latest Practicable Date, we did not receive any material claims from our customers or residents in the areas we operate for failing to comply with the relevant environmental requirements. We expect that the PRC government will implement more stringent regulation over hazardous waste treatment in the near future. We will continue to strictly implement our environmental protection measures to ensure compliance with the applicable PRC laws and regulations.

Governance on environmental-related risks and social responsibilities, including the respective roles and extent of involvement of our Directors and senior management of our Group

Our Group acknowledges its responsibility on environmental protection and social responsibilities and is committed to comply with the environmental, social and governance (“ESG”) reporting requirements upon [REDACTED]. We have established an ESG policy (the “ESG Policy”) which outlined, among others, (i) the appropriate risk governance on ESG matters, (ii) ESG strategy formation procedures, (iii) ESG risk management and monitoring, and (iv) the identification of key performance indicators (“KPIs”) and the relevant measurements. Our Group’s ESG Policy was established in accordance with the standards of Appendix 27 to the Listing Rules.

The Board has the overall responsibility for evaluating and determining our Group’s ESG-related risks, and establishing, adopting and reviewing the ESG vision, policy and target of our Group. Certain senior management of our Group are designed to support our Board in implementing the ESG policy and collecting ESG data from different parties while preparing for the ESG report. It serves as a supportive role and has to report to our Board regularly and to oversee and monitor in implementing measures to address our Group’s ESG-related risks and responsibilities.

Upon [REDACTED], our Directors confirm that we will closely monitor and ensure strict compliance with Corporate Governance Code and Corporate Governance Report as set out in Appendix 14 of the Listing Rules, the Environmental, Social and Governance Reporting Guide as set out in Appendix 27 of the Listing Rules and all relevant rules and regulations in relation to environmental, social and governance aspects.

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OCCUPATIONAL HEALTH AND SAFETY MATTERS

We are subject to the relevant PRC laws and regulations regarding labour, safety and work-related incidents. Under these laws and regulations, we are required to maintain safe production conditions and to protect the occupational health of our employees. We have implemented production safety management policies and safety measures based on the relevant laws and regulations in the PRC, including procedures on investigation, reporting to management and corrective activities in the event of an occurrence of an accident. We provide training on occupational health and safety for our employees to ensure that they are familiar with the occupational health and safety standards and procedures and our employees are required to follow the relevant standards and procedures.

Set out below are certain general measures included in our safety policy to prevent work accidents:

- proper and effective communication of safety procedures shall be established among our management, safety department, employees by, among others, maintaining proper records of accident statistics, safety reports and training documents, holding regular internal and external safety meetings and conducting briefings on occupational health and safety to all level of personnel;
- health and safety risk assessments to identify potential risks associated with the hazardous waste shall be conducted before commencement of our works and regularly during the execution stage;
- the safety track record and safety standard shall be considered when selecting suppliers provide transportation services;
- emergency response plan shall be developed and implemented and drills shall be organised regularly;
- our safety department shall be responsible for maintaining records of safety training, identifying appropriate training programmes for our employees, organising and inspecting the emergency response drills as well as ensure strict compliance with all applicable occupational health and safety laws and regulations and our internal safety policy; and
- all identified non-compliance at work sites must be recorded, reported to our safety team and management in a timely manner.

In October 2018, HC Environmental obtained the Occupational Health and Safety Management Systems (OHSMS 45001) certificate. During the Track Record Period and up to the Latest Practicable Date, there were no material accidents involving any serious personal injury or significant property damage. Our Directors confirm that we were not subject to any penalties or disputes relating to any production safety matters that have a material adverse effect on our financial conditions or business operations during the Track Record Period and up to the Latest Practicable Date.

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Our Directors are also of the view that the production safety measures currently adopted are in line with the market practice of the industries in which our Group is engaged.

INSURANCE

We maintain integrated insurance coverage on our properties and fixed assets, production facilities and equipment against property damage. We also make contributions to social security insurance for our employees in accordance with the relevant laws and regulations of the PRC. We also maintained product liability insurance coverage with respect to our sales, which is not compulsory in the PRC. Our Directors believe that this is in line with the general practice in the PRC of the industry in which our Group is engaged.

Our Directors are of the view that we have maintained sufficient insurance coverage for our business and operations. Certain types of risks, such as the risk in relation to the collectability of our trade receivables and liabilities arising from events such as epidemics, natural disasters, adverse weather conditions, political unrest and terrorist attacks, are generally not covered by insurance because they are either uninsurable or it is not cost justifiable to insure against such risks. See “Risk Factors — Risks Relating to Our Business and Industry — Our Insurance Coverage May Not Adequately Cover the Risks Related to our Business and Operations.” in this document for details.

PROPERTIES

Our head office and production facilities for our business operations are located in Laizhou city, Shandong province.

Owned Properties

As at the Latest Practicable Date, we owned six parcels of land, with an aggregate area of approximately 228,683 sq.m., and 11 buildings, with an aggregate gross floor area of approximately 159,014 sq.m. in the PRC. Save for the two warehouses used for the hazardous waste storage rental services, all of the above properties are used for non-property activities as defined under Rule 5.01(2) of the Listing Rules. The total market value of our property interests as at 31 March 2021 was approximately RMB309.5 million, according to the property valuation report prepared by Cushman & Wakefield Limited. Cushman & Wakefield Limited had valued the properties owned by us as at 31 March 2021. The text of the letter and the valuation report issued by Cushman & Wakefield Limited are set out in Appendix III to this document.

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Land use right

As at the Latest Practicable Date, we have obtained the appropriate land use right certificates for six parcels of land that we own, with an aggregate gross site area of approximately 228,683 sq.m., three of which parcels of land have been pledged for bank borrowings. The following table sets forth a summary of our land use rights:

No.	Land use right owner	Number of parcel of land	Location	Gross site area (sq.m.)	Existing use	Expiry date
1	HC Mining	5	Shahe town, Laizhou city, Shandong province	195,231	Industrial	23 December 2064
2	HC Environmental	1	Jincheng town, Laizhou city, Shandong province	33,452	Industrial	25 November 2059

Buildings

As at the Latest Practicable Date, we obtained the appropriate property ownership certificates for 11 buildings that we occupied in the PRC with an aggregate gross floor area of approximately 159,014 sq.m, of which six buildings have been pledged. The following table sets forth a summary of the buildings that we occupied:

No.	Building used by	Number of buildings	Location	Aggregate gross floor area (sq.m.)	Existing use
1	HC Mining	7	Shahe town, Laizhou city, Shandong province	143,607	Office, dormitory, warehouse and industrial
2	HC Environmental	4	Jincheng town, Laizhou city, Shandong province	15,407	Office, warehouse and industrial

As at the Latest Practicable Date, we had four buildings, with a total gross floor area of 1,986 sq.m., without relevant construction procedures and real estate title certificates, located on our owned land. The buildings involved were three bungalows and one canopy enclosure. We use the canopy enclosure as waiting area and parking space for delivery vehicles and the bungalows for storage of sundry items. As advised by our PRC Legal

BUSINESS

Advisors, the potential legal consequences would be mandatory demolition of such buildings within a prescribed period and if the buildings cannot be demolished, the buildings or the unlawful income would be confiscated and we may, in addition be fined not more than 10% of the construction cost of such buildings. See “Risk Factors — Risks Relating to Our Business and Industry — We may be subject to potential adverse consequences due to our lack of valid title certificates in respect of certain properties we occupied in the PRC.” in this document. Given that these buildings are not used for production and operation premises or office premises of HC Mining, our Directors are of the view that such risk would not have a material adverse effect on our business operations or financial positions. As at the Latest Practicable Date, our Group was not under any notice to demolish any of such buildings. In case we were being noticed, we shall duly comply with such request. It is estimated by our Directors that the demolition cost would be approximately RMB75,000.

Leased Properties

Land use rights

As at the Latest Practicable Date, we leased, as the lessee, a parcel of land in the PRC, details of which are set forth below:

Lessee	Location	Leased area	Existing use	Term of lease	Lease expiry date
HC Mining	Within Huangsanjiao (Laizhou) Advanced Manufacturing Industrial Zone, Laizhou city, Shandong province	24.5 mu (equivalent to approximately 16,000 sq.m.)	Green space and roads	2 years	30 September 2021

In respect of the above leased land, the lessor has not yet obtained the land use right ownership certificate. As advised by our PRC Legal Advisers, if a dispute arises from the lessor’s lack of authority to lease the aforementioned leased land or if the lease agreement is claimed to be invalid by an entitled third party, there is a risk that HC Mining will not be able to continue to use the said leased land. Given that the leased land is not used for production and operation premises or office premises of HC Mining, our Directors are of the view that such risk would not have a material adverse effect on our business operations or financial positions.

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Buildings

As at the Latest Practicable Date, we leased, as the lessee, two properties with an aggregate gross floor area of approximately 770 sq.m. in the PRC. The following table sets forth the property leased by the Group in the PRC:

No.	Lessee	Location	Leased area (sq.m.)	Existing use	Term of lease	Lease expiry date
1	HC Mining	4/F, No. 317 Service Centre, Beiyuan Road, Laizhou city, Shandong province	720	Office	Three years	31 March 2023
2	HC R&D	307, Shandong Qiaoshang Shuangchuang Industrial Park, Qianbeiliu Village, Yonganlu Street, Laizhou city, Shandong province	50	Office	Three years	31 October 2023

As at the Latest Practicable Date, we, as the landlord, leased out two warehouses in our production facility in Shahe Town. See “— Our Production Facilities — Our Warehouses — Our Rental Services for Storage of Hazardous Wastes” above for further details of the two lease agreements.

As at the Latest Practicable Date, the four lease agreements for our leased properties, either as the landlord or the lessee, had not been registered with the competent construction or real estate authorities as required under PRC laws. Registration of lease agreements requires the submission of certain documents, including identity documentation of the counterparties and title certificates of the relevant properties, to the authorities. Therefore, the registration is subject to the cooperation of our counterparties, which is not within our control.

As advised by our PRC Legal Advisers, the lack of registrations will not affect the validity and enforceability of these lease agreements. However, the relevant government authorities may require us to rectify these unregistered lease agreements within a certain period of time and, if we fail to rectify, impose a fine from RMB1,000 to RMB10,000 for each unregistered lease agreement. See “Risk Factors — Risks Relating to Our Business and Industry — We may be subject to administrative penalties as we have not registered all of our leased agreements with competent construction or real estate administration authorities.” in this document. Our PRC Legal Advisers have advised us that the estimated total amount of potential penalty for our failure to register our lease agreements is RMB4,000 to RMB40,000. As at the Latest Practicable Date, we had not received any notice from any regulatory authority with respect to potential administrative penalties or enforcement actions as a result of our failure to file the lease agreements described above.

BUSINESS

In the event that our leases as the lessee are challenged by third parties, we intend to find alternative locations nearby and relocate relevant offices. We estimate that the relocation costs will be approximately RMB5,500. Given that these properties are not material to us as they are only used for office purpose, and based on the above, our Directors are of the view that such non-registration would not have a material adverse effect on our business operations or financial positions.

Our Controlling Shareholders have undertaken to indemnify our Group against all fines and penalties incurred by the Group as a result of or in connection with the non-compliances regarding our properties. See “Other Information — 15. Tax and other Indemnities” in Appendix V to this document for the indemnity undertakings given by our Controlling Shareholders.

Save as disclosed above, our Group did not have any other property interests as at the Latest Practicable Date.

INTELLECTUAL PROPERTY RIGHTS

As at the Latest Practicable Date, we are the registered owner of certain trademarks, a patent and a domain name in the PRC and Hong Kong. For further details in relation to our intellectual property rights, see “Other Information — Further Information about the Business of our Group — 9. Intellectual Property Rights of our Group” in Appendix V to this document.

During the Track Record Period and up to the Latest Practicable Date, we had not been subject to any intellectual property infringement claims which had any material adverse impact on our Group. See also “Risk Factors — Risks Relating to Our Business and Industry — We may not be able to adequately protect our intellectual property rights in relation to our research and development technology, which could result in losses to our revenue and profit and could, in turn, materially and adversely affect our business, financial position and results of operations.” in this document.

LEGAL PROCEEDINGS

During the Track Record Period and up to the Latest Practicable Date, there was no litigation or arbitration pending or threatened against our Group or any of our Directors which could have a material adverse effect on our Group’s financial condition or results of operations.

REGULATORY COMPLIANCE

We had been involved in certain non-compliance incidents during the Track Record Period and up to the Latest Practicable Date, a summary of which is set out in the table below. Save as disclosed below, our Directors, based on the legal opinion issued by our PRC Legal Advisers, confirm that we have been in compliance in all material respects with the applicable PRC laws and regulations relating to our business operations during the Track Record Period and up to the Latest Practicable Date.

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Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>(i) <i>Social insurance and housing provident fund</i></p> <p>HC Mining and HC Environmental failed to make full contributions to the social insurance and housing provident fund for employees during the Track Record Period.</p> <p>We estimate the underpaid amount of social insurance and housing provident fund contributions for the years ended 31 December 2018, 2019 and 2020 was approximately RMB0.7 million, RMB1.1 million and RMB0.9 million, respectively.</p>	<p>The non-compliance incident was mainly due to (i) the insufficient understanding of the relevant PRC laws and regulations of our responsible handling staff, and (ii) absence of professional advice for our staff at the material time.</p>	<p>According to Social Insurance Law of the PRC (《中華人民共和國社會保險法》), where an employer fails to pay social insurance premiums in full, the relevant competent authority shall order it to pay or make up the balance within a prescribed time limit, and impose daily late charge of 0.05%. If an employer still fails to pay within the time limit prescribed, the relevant competent authority may impose a fine of one to three times of the overdue amount.</p> <p>According to the Housing Provident Fund Regulation (《住房公積金管理條例》), in the event that an employer fails to pay its housing provident fund contributions, the relevant competent authority may order it to rectify the non-compliance incidents within the prescribed time limit, failing which the relevant competent authority may apply to the court for compulsory enforcement.</p> <p>We have obtained (i) confirmations from Laizhou Human Resources and Social Security Bureau (萊州市人力資源和社會保障局), and (ii) confirmations from Yantai Housing Provident Fund Management Centre Laizhou Branch (煙臺市住房公積金管理中心萊州分中心) that HC Mining and HC Environmental have not and would not been penalised for violating laws and regulations related to social insurance and housing provident fund, respectively.</p> <p>As at the Latest Practicable Date, we had not been penalised for the above matters nor received any notice or demand to make payments for the social insurance and housing provident fund contributions. We were also not aware of any employee's complaints or demands for payment of social insurance or housing provident fund contributions.</p> <p>As advised by our PRC Legal Advisers, based on the foregoing, it is remote that our Group will be penalised by the relevant authorities for such non-compliant incidents.</p>	<p>The carrying amount of our provisions for the underpaid amount of our social insurance and housing provident funds contributions amounted to approximately RMB1.1 million, RMB1.7 million and RMB2.0 million, respectively, as at 31 December 2018, 2019 and 2020. Our Directors are of the view that, the provisions can cover the potential payment in relation to the non-compliance matters.</p> <p>Our Directors believe that the foregoing non-compliance incident has not caused or will not cause any material and adverse financial or operational impact on us as our internal policy and guidelines have been revised to include (i) calculation of social insurance and housing provident fund contribution matters, (ii) our finance department will review calculation of the relevant contributions, and keep proper records of any contributions paid, and (iii) internal review and approval by our general manager of the calculation of the relevant contributions.</p> <p>In addition, we have designated our financial controller to carry out procedures of review to ensure the register of payment record is updated properly and that all payments of contributions to social insurance and housing provident fund are made on a timely basis.</p>

BUSINESS

Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>(ii) <i>Transportation of cyanide tailings</i></p> <p>During the Track Record Period, HC Mining and HC Environmental had engaged transportation companies which did not possess appropriate permits for the operation of road transport of dangerous goods (“Permits”) for transporting cyanide tailings in Laizhou city from our customers (the “Engagement”).</p>	<p>According to the Safety Management of Dangerous Goods in Road Transport (《危險貨物道路运输安全管理办法》) (the “Regulations”), it is the obligations of the carriers of dangerous goods to hold Permits and to carry dangerous goods in accordance with the Permits.</p> <p>Prior to each Engagement, our staff ensured the vehicles that we use must have in place effective protective measures for the safe transportation of cyanide tailings from our customers. In light of this requirement and our staff’s reliance on the representations made by the transportation companies regarding their legal and compliance obligations before each Engagement, our staff did not check the Permits of the transportation companies prior to each Engagement.</p>	<p>According to the Regulations, there is no administrative penalties on consignors of dangerous goods (except consignors of dangerous chemicals) which do not engage carriers of dangerous goods with the Permits.</p> <p>We have obtained written confirmations from the Laizhou Branch of Yantai Municipal Ecology and Environment Bureau (煙臺市生態環境局萊州分局) (the “Environment Bureau”), pursuant to which, the Environment Bureau, among others, (i) confirmed that HC Mining and HC Environmental did not have any material breach of relevant environmental protection laws and regulations for the Engagement; and (ii) HC Mining and HC Environmental had not been and would not be subject to any administrative penalties’ in relation to relevant environmental protection laws and regulations for the Engagement.</p> <p>As advised by our PRC Legal Advisers, the Environment Bureau is the competent authority to confirm the related matters.</p>	<p>We have implemented the below enhanced internal control measures (i) request the transportation companies to provide the Permits and other qualification documents prior to their engagement, (ii) regular assessment of the quality of services provided by the transportation companies and their respective qualification requirements, and (iii) upon expiration of the Permits, request the transportation companies to provide the renewed Permits and other qualification documents to us for filing purposes.</p> <p>During the Track Record Period, no environmental pollution accident or any major environmental violation in relation to the Engagement has occurred.</p> <p>Our Directors confirmed that the cost of engagement for approved transportation companies with relevant Permits is comparable with those without. As at the Latest Practicable Date, we only engage transportation companies with the Permits, and such approach has not and would not impose any material impact on the operations and financial performance of our Group.</p>

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Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>(iii) <i>Bill financing</i></p> <p>In November and October 2018, our PRC subsidiaries, being HC Mining and HC Environmental, were involved in two occasions that involved the issue of bank bills without underlying transactions which was not in compliance with Negotiable Instruments Laws of the PRC (《中華人民共和國票據法》) (the “Arrangements”).</p> <p>In September and October 2018, (i) HC Mining, and (ii) HC Environmental respectively entered into an individual agreement to purchase (i) gravel, and (ii) construction materials in the amount of (i) RMB2 million, and (ii) RMB10 million respectively from Company A, which was a company beneficially held by Mr. Liu and was deregistered on 8 May 2019. Both transactions were then presented to two local banks (“Endorsing Banks”) for the issuance of a series of bank bills (the “Bank Bills”) to Company A in (i) October, and (ii) November 2018. Shortly after, both purchase agreements were terminated without the performance of the actual transactions. Company A then endorsed the Bank Bills to our Group and we further endorsed the Bank Bills for settlement of genuine transactions with independent third parties for settlement of (i) construction costs and the refund of a prepayment received from a potential customer, and (ii) land purchase costs.</p>	<p>As advised by our Directors, the principal reason for this non-compliance was due to inadequate supervision of our finance department which was delegated to handle financing arrangements. After the management’s decision to raise fund for land purchase, the relevant finance manager who handled the financing plan attempted the Arrangements with an intention to save time and costs for our Group. According to the Arrangements, we were required to place a deposit of 50% of the value of the Bank Bills to the Endorsing Banks for issuance of Bank Bills. In the two occasions, we obtained Bank Bills in total with face amount of RMB12 million by placing RMB6 million pledged deposit to the Endorsing Banks. The relevant finance manager confirmed that she was not aware that the Arrangements were not in compliance with the relevant PRC laws and regulations and she thought it was an acceptable and convenient method to raise funds without going through the time-consuming normal bank loan approval procedures.</p>	<p>As advised by our PRC Legal Advisers, the Arrangements were not in compliance with Article 10 of the Negotiable Instruments Law (《中華人民共和國票據法》), which provides that bank acceptance bills must be issued on the basis of actual underlying transactions and debt relationship. Further, according to our PRC Legal Advisers, there are no specific provisions in the Negotiable Instruments Law or any relevant laws that impose any administrative or criminal liability for the Arrangements.</p> <p>Assuming our Group did not enter into the Arrangements and had instead obtained bank borrowings from banks, our Group would have incurred additional interest expenses on RMB6 million financed by way of Arrangements for a year. As such, the interest expenses saved by our Group was approximately RMB429,000, based on the weighted average effective interest rates of bank borrowings.</p>	<p>Since November 2018, we have ceased to enter into any new Non-compliant Bill Financing Arrangements.</p> <p>To prevent recurrence of this non-compliant incident, we have adopted the following internal control measures (i) implementation of internal guidelines and policies for (a) approving, reporting and monitoring bill financing transactions, and (b) prohibiting use of bill financing without underlying transactions, (ii) our finance department shall review all application for payment to suppliers by bank acceptance bills together with the relevant underlying agreements and assess the genuineness of the information contained in the application. The application must then be approved by our general manager, (iii) all bank acceptance bills shall be reviewed by our finance department and approved by our general manager before acceptance, (iv) any single transaction involving payment by or acceptance of bank acceptance bill of more than RMB5 million must be approved by our Board, and (v) internal review on bill financing arrangements to be conducted quarterly by our finance department.</p>
		<p>To assess the legal consequences and impact of the Arrangement, our PRC Legal Advisers have interviewed and consulted with (i) Laizhou city branch of the People’s Bank of China (中國人民銀行萊州市支行) (“Laizhou PBOC”), (ii) Laizhou city Office, Yantai Branch of China Banking Regulatory Commission (中國銀行保險監督管理委員會煙臺監管分局萊州辦事處) (“Laizhou CBRC”), both competent authorities to opine on such matter, and (iii) the Endorsing Banks. Each of Laizhou PBOC and Laizhou CBRC has confirmed that the Arrangement has ceased, it has not received any complaint on the matter and it has not impose any administrative penalties on HC Mining and HC Environmental and unless complaints are received in relation to the Arrangements, it will not impose any administrative penalties on HC Mining, HC Environmental, the shareholders, directors and senior management of HC Mining and HC Environmental. Each of the Endorsing Banks confirmed that the relevant Bank Bills have been duly settled, they did not incur any loss as a result of the issuance of the Bank Bills, they have not received or launched any complaint against HC Mining and HC Environmental and they have not taken any legal actions against the shareholders, directors and senior management of HC Mining and HC Environmental.</p>	

BUSINESS

Details of non-compliance incident	Reasons	Possible legal consequences and impact	Remedial measures and internal control measures
<p>The Bank Bills were issued for one year and they were duly settled in (i) October and (ii) November 2019.</p>	<p>As confirmed by the Directors, apart from the two occasions as mentioned above, we did not conduct any further Arrangements during the Track Record Period and up to the Latest Practicable Date. We have ceased to enter into any new Arrangements since November 2018 and the Bank Bills were duly settled by November 2019.</p>	<p>On the basis of the interview results from Laizhou PBOC, Laizhou CBRC and the Endorsing Banks, our PRC Legal Advisers are of the view that the chance of HC Mining and HC Environmental being penalised for the Arrangements is remote because (i) the Endorsing Banks did not incur any loss as a result of the issuance of the Bank Bills, (ii) there are no specific provisions in the Negotiable Instruments Law or other applicable relevant PRC laws that impose any administrative penalties on the relevant companies and their shareholders, directors and senior executives for the Arrangements, and (iii) there has been no administrative penalties in connection with these arrangements brought against HC Mining and HC Environmental.</p>	
		<p>Our Directors are of the view that the Arrangements did not have any material impact on our operations and our ability to obtain future fundings or borrowings because (i) of the views of our PRC Legal Advisers based on the interview results with Laizhou PBOC, Laizhou CBRC and the Endorsing Banks, (ii) the total additional fund resulted from such activities was only RMB6 million and we have sufficient financial resources generated from our operating activities, and (iii) the interest expenses saved by our Group under the Arrangements were not material to our operating profit during the same period.</p>	

BUSINESS

Indemnity given by our Controlling Shareholders

Our Controlling Shareholders [have entered] into the Deed of Indemnity in favour of our Group, under which they have agreed to indemnify our Group, subject to the terms and conditions therein, in respect of any liability that may be borne by our Group in respect of the above non-compliance incidents. See “Other Information — 15. Tax and other indemnity” in Appendix V to this document for further details of the indemnity that was given by our Controlling Shareholders.

RISK MANAGEMENT AND INTERNAL CONTROL

Risk Management

With the growth and expansion of our operations, potential risks to our business increase as well. In order to identify, assess and control the risks that may create impediments to the growth of our business, we have designed and implemented risk management policies to address various potential risks identified in relation to our operations, including operational risks, credit risks, market risks, financial risks and legal risks. Our risk management policies set forth procedures to identify, analyse, categorise, mitigate and monitor various risks as well as the reporting hierarchy of risks identified in our operations. Each of our business departments and functions is responsible for identifying and evaluating the risks relating to its area of operations and implementing our risk management and internal control systems.

Our audit committee is responsible for overseeing our management in the implementation of our overall risk management and internal control systems and assessing our risk management and internal control systems. For details about the qualifications and experiences of the members of our audit committee, see “Directors and Senior Management”.

We have adopted a risk management system, which we would conduct an enterprise risk assessment when there is a significant change in potential risks, or at least annually, to ensure that:

- a critical risk identification and assessment process is conducted with the involvement of senior management;
- critical risks are identified based on risk parameters and ranked accordingly;
- key risk mitigation measures are developed; and
- the results of the risk assessment are reviewed and approved by the board of Directors and the audit committee of the Company.

For measures over quality control and other risks, see “— Quality Assurance” above. We do not adopt any hedging policy. For details regarding the risks involved in our operations, see “Risk Factors” in this document.

BUSINESS

Internal Control

It is responsibility of our Board to ensure that our Company maintains sound and effective internal controls to safeguard our Shareholders’ investment and our Group’s assets at all times. We have adopted or expect to adopt immediately after the [REDACTED] a series of internal control policies, procedures and programmes designed to provide reasonable assurance for achieving objectives including effective and efficient operations, reliable financial reporting and compliance with applicable laws and regulations. Highlights of our internal control system include the following:

- **Code of conduct.** Our code of conduct explicitly communicates to each employee our values, acceptable criteria for decision-making and our ground rules for behaviour.
- **Internal audit.** Our internal audit team regularly monitors key controls and procedures in order to assure our management that the internal control system is functioning as intended. The audit committee is responsible for supervising our internal audit function.
- **Anti-corruption:** Our anti-corruption policies provide the tools and resources necessary to enable, monitor and enforce full compliance with the anti-bribery and anti-corruption laws of the PRC and other countries where we conduct our business operations.
- **Appropriate training.** We regularly provide training to our Directors, senior management and employees with respect to our internal control policies and the duties and responsibilities of directors and management of listed companies under the Listing Rules and other applicable laws and regulations.
- **Compliance with Listing Rules.** Our various policies aim to ensure compliance with the Listing Rules, including but not limited to aspects related to corporate governance, connected transactions and securities transactions by our Directors.
- **Compliance adviser.** We have appointed First Shanghai Capital Limited as our compliance adviser to advise on ongoing compliance with the Listing Rules and other applicable securities laws and regulations in Hong Kong.
- **Non-compliances.** Please see “Regulatory Compliance” in this section for our internal enhancement measures that we have implemented to prevent re-occurrence of the non-compliances. Our Directors are of the view that the internal enhancement measures are adequate and effective for our Group to avoid the non-compliances going forward.

Our Directors are of the view that our current internal control measures are adequate and effective.