



中國同輻股份有限公司

China Isotope & Radiation Corporation

(於中華人民共和國註冊成立的股份有限公司)

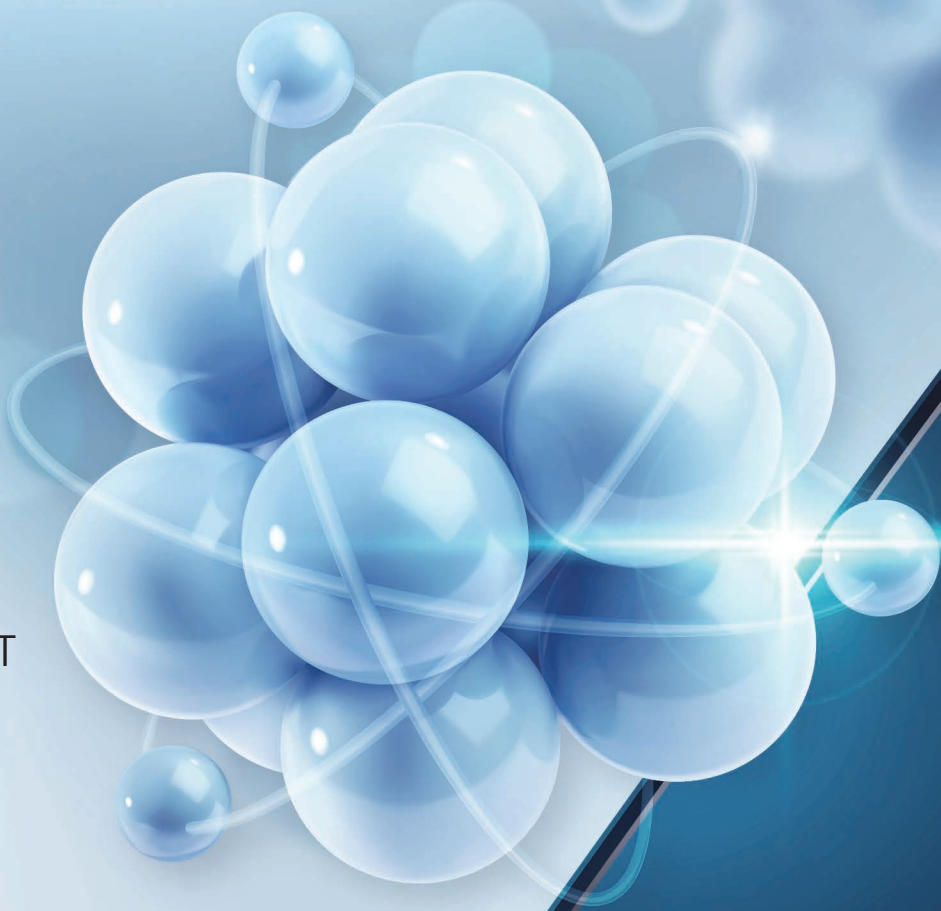
(A joint stock company incorporated in the People's Republic of China with limited liability)

股份代號 Stock Code : 1763



2019

ENVIRONMENTAL,
SOCIAL AND
GOVERNANCE REPORT
環境、社會及管治報告



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DEFINITIONS

Unless otherwise stated in the Report, the following terms are defined as follows:

PRC	People's Republic of China
Hong Kong	Hong Kong Special Administrative Region of the People's Republic of China
SEHK	The Stock Exchange of Hong Kong Ltd.
Listing Rules	The Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Ltd.
ESG Reporting Guide	The Environmental, Social and Governance Reporting Guide set out in Appendix 27 of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Ltd.
Report or ESG report	Environmental, social and governance report
ESG	Environmental, social and governance
Year	1 January 2019 to 31 December 2019
Company	China Isotope & Radiation Corporation
CIRC, Group or we	China Isotope & Radiation Corporation and its subsidiaries
HTA	HTA Co., Ltd.
CNGT	Chengdu Gaotong Isotope Co., Ltd. (CNNC)
Headway	Shenzhen Zhonghe Headway Bio-Sci & Tech Co., Ltd.
BNIBT	Beijing North Institute of Biological Technology Co., Ltd.
CNNC	China National Nuclear Corporation
Jinhui Radiation	Beijing Atomic High-Tech Jinhui Radiation Technology Application Co., Ltd.
Wuhan Zhongtong Lanbo	Wuhan China Nuclear Zhongtong Lanbo Medical Laboratory Co., Ltd.
Hazardous Chemicals	Hazardous Chemical Waste
CAPA	Corrective Action and Preventive Action
Yuan	Renminbi yuan, the lawful currency of the PRC

ABOUT THE REPORT

BASIS OF PREPARATION

The Group prepared this Report in accordance with the ESG Reporting Guide published by the SEHK. The Report complies with the “comply or explain” provisions of the ESG Reporting Guide and was prepared in adherence to the four reporting principles consisting of materiality, quantitative, balance and consistency.

This is the second ESG report published by us. In order to obtain a comprehensive understanding of the Group’s ESG performance, the Report is to be read in conjunction with the Corporate Governance Report in the 2019 Annual Report.

REPORTING SCOPE

The scope of the Report covers the Group’s core businesses (see the chapter of “About the Group” in the Report for more details) in the Mainland China and mainly disclosed the Group’s policies, measures, performance and commitment to sustainable development.

Given the significance and widespread concern of the coronavirus disease, the Report will specifically disclose the work of the Group in this epidemic to report to the stakeholders in a timely, open and transparent manner. Unless otherwise stated, the reporting period of the information covered by the Report is from 1 January 2019 to 31 December 2019, which is consistent with the 2019 Annual Report.

DECLARATION

The Board of Directors of the Group bears full responsibility for ESG strategies and reporting. The Report is published in two languages: traditional Chinese and English. Should there be any discrepancy in the Report, the traditional Chinese version shall prevail.

ACCESS TO THE REPORT

The electronic Report could be downloaded from the Group’s official website at <https://www.circ.com.cn>. If you have any inquiries or suggestions about the Report, please feel free to contact us via email. (Email address: ir@circ.com.cn).

ABOUT THE GROUP

As a leader in the isotopes and irradiation technology application industry in the PRC, CIRC tapped into the field of isotopes and irradiation technologies since it was established in 1983, and tilled the nuclear technology application industry for over 30 years. The businesses of the company have basically covered the entire nuclear technology application industry. Given the high entry qualification and complex technological barriers, CIRC has huge space for business expansion in addition to its existing business.

CIRC focuses on research and development, manufacturing, and sales of pharmaceuticals, and is also engaged in radioactive sources, irradiation, and independent clinical laboratory services. The Company derives 83.0% of its revenue and 90.0% of its gross profit from the pharmaceuticals segment in the nuclear medicine industry. As a leading enterprise in the PRC nuclear medicine industry featured with huge potential, high entry barriers and strong profitability, CIRC is the largest manufacturer of imaging diagnostic and therapeutic radiopharmaceuticals, UBT kits and analyzers, and RIA kits in the PRC. CIRC has high market presence. CIRC is the largest radioactive source products manufacturer with most comprehensive product portfolio in the PRC, and is the only radioactive source product manufacturer in the PRC with manufacturing capability to produce various products, such as cobalt-60 for irradiation service and cobalt-60 for medical applications. In terms of the irradiation service, CIRC is the third largest provider for irradiation service, and is the only company which provides the services of the upstream production as well as the downstream design and installation of irradiation facilities. Two subsidiaries of CIRC are among the three qualified EPC service providers approved by the Ministry of Ecology and Environment of the People's Republic of China to engage in the design, manufacturing and installation of irradiation facilities in China.

As an important member of isotopes and irradiation technology industry of CNNC, CIRC has achieved the domestication of radioisotope raw materials production and research and development of irradiation products by leveraging on the availability of CNNC's nuclear reactors, cyclotrons and resources on professional and technical staff.

MANAGEMENT RESPONSIBILITY

RESPONSIBLE ENGAGEMENT

Keeping on-going communication with stakeholders and building up close relationship is the key to our sustainable development. During the Year, the Group communicated with stakeholders through a wide range of communication channels to understand their concerns about the ESG issues of the Group, so as to formulate corresponding development plan and management strategy. For the detailed information about the stakeholders' communication channels and their expectations, please refer to the following table:

Key Stakeholders	Communication Channels	Expectation
Shareholders	<ul style="list-style-type: none"> Corporate reports and other announcements Shareholder meetings Official website 	<ul style="list-style-type: none"> Economic performance Corporate governance Compliant operation
Government and Regulatory Authorities	<ul style="list-style-type: none"> Corporate reports and other announcements 	<ul style="list-style-type: none"> Compliance with relevant laws and regulations Tax according to law
Employees	<ul style="list-style-type: none"> Informal discussion Trade union activities Email 	<ul style="list-style-type: none"> Employees' rights, benefits and development Health and safety
Customers	<ul style="list-style-type: none"> Customer visit Investigation about the satisfaction of service 	<ul style="list-style-type: none"> Product quality High-quality service
Suppliers	<ul style="list-style-type: none"> Public tender Interview and email 	<ul style="list-style-type: none"> Fair and open tendering process Win-win cooperation
Local Community	<ul style="list-style-type: none"> Charitable activities 	<ul style="list-style-type: none"> Compliance with relevant laws and regulations Community engagement Environmental protection

MANAGEMENT RESPONSIBILITY (CONTINUED)

In order to further understand the focus of the stakeholders and determine the focus of disclosure in the Report, during the Year, the Group conducted a materiality assessment through questionnaire survey. The specific process is as follows:

I. Identification

Collaboratively by communicating regularly with key stakeholders to understand their expectations, and in referencing to the ESG Reporting Guide, industry benchmarking analysis and development characteristic of the enterprise, the Group created a pool of sustainability issues which consisted of a total of 21 sustainability issues after screening (eight environmental issues and 13 social issues).

II. Ranking

The Group invited the management and employees to participate in the assessment via an online questionnaire, where the sustainability issues in the pool were ranked according to the levels of attention paid. A total of 488 valid feedbacks were received in the survey.

III. Evaluation

Based on two dimensions of “the impact on the CIRC” and “the impact on stakeholders”, the Group examined the materiality of the issues. As a result, five material issues in environmental aspect and eight material issues in social aspect were identified.

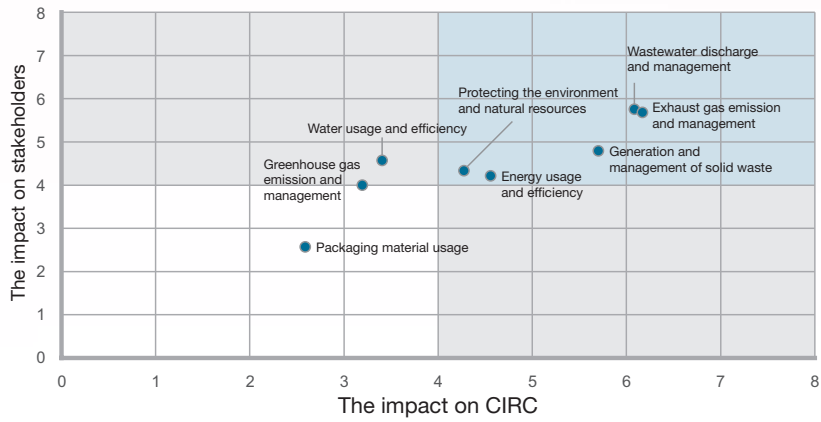
IV. Review

The Group reviewed the screened material issues and confirmed their importance to the Group's stakeholders, thereby disclosed specifically in the Report.

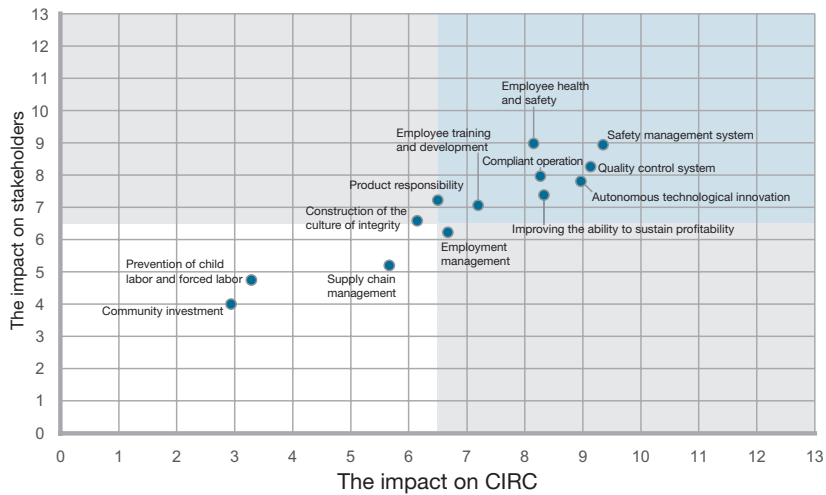
MANAGEMENT RESPONSIBILITY (CONTINUED)

The results of the materiality assessment are shown in the following figures.

The Matrix of Material Issues - Environmental Aspect



The Matrix of Material Issues - Social Aspect



MANAGEMENT RESPONSIBILITY (CONTINUED)

Issues	Environmental Aspect	Social Aspect
1 st Tier Issues ¹ (distributed in the blue area of the matrix of material issues)	<ul style="list-style-type: none"> Exhaust gas emission and management Wastewater discharge and management Generation and management of solid waste Energy usage and efficiency Protecting the environment and natural resources 	<ul style="list-style-type: none"> Safety management system Quality control system Autonomous technological innovation Compliant operation Employee health and safety Improving the ability to sustain profitability Employee training and development Product responsibility
2 nd Tier Issues ² (distributed in the gray area of the matrix of material issues)	<ul style="list-style-type: none"> Water usage and efficiency Greenhouse gas emission and management 	<ul style="list-style-type: none"> Employment management Construction of the culture of integrity
3 rd Tier Issues ³ (distributed in the white area of the matrix of material issues)	<ul style="list-style-type: none"> Packaging material usage 	<ul style="list-style-type: none"> Supply chain management Prevention of child labour and forced labour Community investment

¹ 1st Tier Issues : Details about strategies and practices are stated in the Report as responses

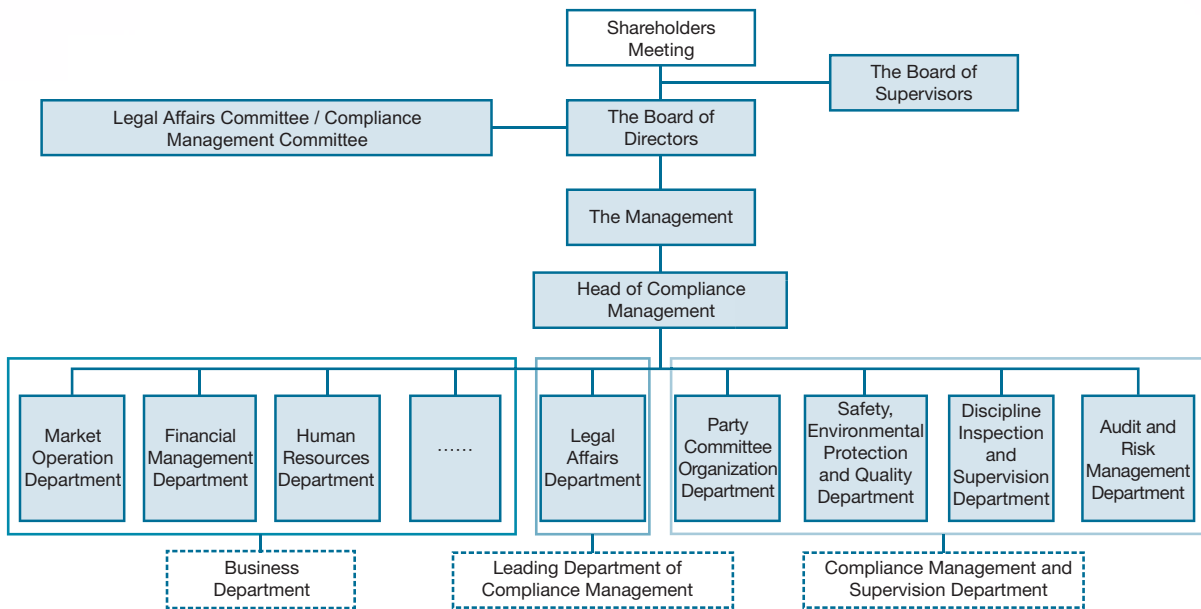
² 2nd Tier Issues : Relevant practices are included in the Report as responses.

³ 3rd Tier Issues : Ongoing concerns

MANAGEMENT RESPONSIBILITY (CONTINUED)

COMPLIANT OPERATION

In order to actively respond to the requirement that “the Board of Directors shall assign special committees to be responsible for promoting the corporate construction under the rules of law, and supervising the law-based management of the corporate in the executive level” in the *Notice on Work Related to the Revision of the Articles of Association of All Levels of the Group (Zhong He Dong Fa [2017] No. 4)*, on 14 March 2019, CIRC pioneered the establishment of the Legal Affairs Committee under the Board of Directors. Regarding the Group’s governance, we clarified the compliance management responsibilities of the Board of Directors, with the Legal Affairs Committee as the subordinate to lead and promote the compliance management. Furthermore, CIRC built up compliance management leadership system by establishing a leader agency for compliance management, assigning the Compliance Management Department and the person in charge, etc. The organisational structure of compliance management in CIRC is as follows:



Picture: Compliance Management Organisational Chart of CIRC

MANAGEMENT RESPONSIBILITY (CONTINUED)

In terms of compliance management policies, CIRC has formulated the *Compliance Management Policy of CIRC* according to regulatory documents such as the *Guidelines for Compliance Management of Central Enterprises (Trial)*, the *Guidelines for Enterprises on the Compliance Management of Overseas Operations*, etc. The work on compliance management specifically regulated by the *Compliance Management Policy of CIRC* includes policy development, risk identification, compliance review, risk response, accountability, assessment and evaluation, compliance training, etc., which clearly requires CIRC and its member units to establish and improve the special compliance management system in relevant key areas gradually. The details are shown as follows:

Key areas of compliance management (including but not limited to)	
Marketing and sales	Improve the management system of marketing and sales, strictly implement the decision-making and approval procedures, establish and improve the self-regulatory integrity system, highlight anti-corruption, anti-business bribery, anti-monopoly, anti-unfair competition, standardise asset transactions, bidding and other activities.
Construction projects	Strictly implement relevant regulations and requirements for construction project management, material procurement, asset disposal, etc., further improve and strictly implement relevant procedures, and standardise the above activities.
Safety and environmental protection	Strictly implement national laws and regulations on safety production and environmental protection, improve enterprise production standards and the safety and environmental protection system, strengthen supervision and inspection, and identify and correct violations in time.
Product quality	Improve the quality control system, strengthen process management, strictly control the quality of all links, and provide high-quality products and services.
Labouring	Strictly abide by labour laws and regulations, improve the management system of labouring contract, standardise the signing, fulfilling, changing and termination of labouring contract, to earnestly safeguard the legitimate rights and interests of labourers.
Finance and tax	Improve the internal control system in finance, strictly implement the operation and approval process on financial matters, strictly abide by the law of financial brokerage, strengthen the awareness of tax payment by law, and strictly abide by tax laws and policies.
Intellectual property	Apply for the registration of intellectual property achievements in a timely manner, standardise the implementation of licensing and transfer, strengthen the protection of trade secrets and trademarks, regulate the use of the intellectual property rights of others in accordance with the law to prevent infringements.
Business partners	Conduct compliance investigations for business partners with potential compliance risks, and promote the conduct of compliance of business partner by signing compliance clauses and requiring compliance commitments.
Sponsor and donation	Establish and improve the management system of sponsor and donation, strictly implement the review and decision-making process to correctly perform corporate social responsibilities.
Others	The specific compliance management system for other key areas, which is developed by each unit according to its own business needs and concerns.

MANAGEMENT RESPONSIBILITY (CONTINUED)

FIGHTING CORRUPTION AND UPHOLDING INTEGRITY

The Group strictly abides by the laws and regulations on the prevention of bribery, extortion, fraud and money laundering, such as the *Criminal Law of the People's Republic of China*, the *Company Law of the People's Republic of China* and the *Anti-Money Laundering Law of the People's Republic of China*, and has formulated the *Management Measures of Anti-fraud in CIRC* and signed the *Professional Integrity Commitment Letter* to regulate integrity and self-discipline of staff and improve the corporate governance. During the Year, the Group did not receive any violations of laws and regulations related to bribery, extortion, fraud and money laundering.

The disciplinary Inspection and Supervision Department is responsible for setting up the reporting hotlines, e-mail box, etc., and publishing these channels, to receive feedbacks such as violating professional ethics, damaging the interests of both parties, etc., from employees at all levels and all parties in the society that are having direct or indirect economic relationship with the company. The Group has set up a mechanism of accountability for bribery acts according to the *Management Rules Against Malpractice in CIRC*, including leadership responsibility and direct responsibility. Leadership responsibility means that the relevant management members are held liable for causing inaccuracy and hidden loss in accounting information for corruption due to their default or oversight within their scope of work; and direct responsibility means that the relevant management members or executives are held liable for causing inaccuracy and hidden loss in accounting information for corruption due to their direct operation or involvement in the concerned decisions, or their authorisation, instruction, order, connivance, harboring and incorrect performance within their scope of work.

In addition, CIRC requires senior management to integrate continuous monitoring of fraud as part of daily activities, including daily management and supervision activities. The key leader of the Party in all units should also take anti-fraud as an important part of anti-corruption work, and ensure that there is a permanent institution for anti-fraud.



Picture: CIRC Carried out education activities on integrity warnings on 24 October 2019



Picture: CIRC held the 2019 video conference of alert education on 13 December 2019

ENVIRONMENTAL RESPONSIBILITY

The Group always adheres to the implementation of environmental protection measures and abides by the *Environmental Protection Law of the People's Republic of China*, *Law of the People's Republic of China on Prevention and Control of Radioactive Pollution*, *Law of the People's Republic of China on Appraising of Environment Impacts*, *Water Pollution Prevention and Control Law of the People's Republic of China*, *Atmospheric Pollution Prevention and Control Law of the People's Republic of China*, *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes*, *Energy Conservation Law of the People's Republic of China*, etc., relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. At the same time, the Group has formulated the *Safety Production and Environmental Protection Responsibility System*, *the Regulations of Safety Use of Electricity*, *Regulations of Environmental Protection*, *Onsite Environmental Monitoring Program*, *Regulations of Radioactive Waste*, *Regulations of Transportation of Radioactive Item*, *Interim Regulations of Solid Waste Storage of Radioactive Articles*, *Regulations of Award and Penalty of Radioactive Waste Management*, *Regulations of Dangerous Goods*, *Implementation Rules for Onsite Collection and Classification of Solid Waste*, etc., in terms of emissions management, resource use, and minimising the significant impact on the environment and natural resources. After a series of policy promotion and implementation, the environment-protection awareness of the employees of the Group in energy saving, emission reduction, water saving and waste reduction has been enhanced.

ADVOCATING RESOURCE CONSERVATION

The Group implements the concept of "Recycling" and strives to reduce the consumption and wasted use of energy resources. CIRC promotes a Cost Reduction and Efficiency Improvement Plan to pursue the long-term sustainable development and develop market competitiveness under the new norm. During the Year, the Group's achievement in cost reduction and efficiency improvement is 57.35 million yuan, which mainly came from the process of production, technical transformation, on-site management, energy management, etc. Currently, the Group has collected and established 165 projects in areas including electricity saving, water saving, technology development, lean management logistic management and others.

Resource category	Management measures
Energy use	<ul style="list-style-type: none"> • Post environmental protection slogan of "Saving Electricity" • Control the temperature of air-conditioning; indoor air-conditioning temperature could not be lower than 26 degrees in summer and not be higher than 20 degrees in winter • Switch off computers' monitors and other electric equipment after work • Use energy saving lighting devices (such as LED) • Use energy saving devices (such as grade 1 energy-efficiency labeled devices)
Water use	<ul style="list-style-type: none"> • Post the environmental protection slogan of "Saving Water" • Promote water saving awareness and guide employees to use water rationally • Use water-saving systems and appliances
Packaging material	<ul style="list-style-type: none"> • Implement the recycling system of packaging material to reuse packaging materials at most
Office supplies	<ul style="list-style-type: none"> • Post signs of "Saving Paper" in key locations • Encourage double-sided printing • Promote paperless (OA) office

ENVIRONMENTAL RESPONSIBILITY (CONTINUED)

REFINED EMISSION MANAGEMENT

In terms of greenhouse gas emission management, the Group pays close attention to relevant environmental issues and takes active actions to reduce greenhouse gas emissions from production and operation activities. In addition to the specific resource consumption reduction measures mentioned in the “Advocating Resource Conservation” section, the Group also encourages employees to use public transportation when they are on duty, and to replace business travel with telephone conferences as much as possible. For instance, in the *Management Measures of Motor Vehicle in Beijing North Institute of Biological Technology Co., Ltd.*, for vehicle management, it regulates that drivers should repair and maintain the vehicle in a timely manner to improve vehicle efficiency and reduce fuel consumption.

In terms of waste management, regarding the characteristics of the radioactive medicine business, the Group generates both radioactive and non-radioactive waste during operation. In order to properly handle the radioactive “Three Wastes” (solid waste, waste water and waste gas) and ensure the smooth progress of production and scientific research activities, the Group has made clear provisions on its management methods, such as the *Measures of Administrative on Radioactive Waste in Beijing North Institute of Biological Technology Co., Ltd.*, and *Regulations on Safety Management for radioactive “Three Waste” of HTA Co., Ltd.*

Specific requirements for handling radioactive “Three Wastes”:

- Separating radioactive waste into different packages and storage sites.
- Radioactive waste stored at temporary storage site should be sealed, labeled and their information should be documented.
- Transferring or sending solid radioactive waste to qualified departments according to certain regulations and the completion handover procedure.
- Strong acid and organic radioactive wastewater are forbidden to be discharged into radioactive liquid pipelines. Instead, they should be collected separately with special packages and stored by the production department. Then, they should be stored and delivered by the company after detailed information is clearly recorded.
- Purification and filtration for radioactive waste gas produced from both Class A and Class B factories are required. The gas needs to go through a specific exhaust chimney and duct before discharging into the atmosphere.

ENVIRONMENTAL RESPONSIBILITY (CONTINUED)

For the management of non-radioactive waste such as paper, plastics, household waste, etc., the Group mainly handed via waste recycling stations or entrusted to a third party for recycling. For Hazardous Chemicals, the Group engaged qualified third-parties to do treatment in accordance with regulations. Furthermore, the Group have formulated the *Safety Management Regulations of Hazardous Chemicals* in accordance with laws and regulations such as the *Regulations on Safe Management of Hazardous Chemicals*, *Rule for Storage of Chemical Dangers*, etc. The specific measures include ①Records the type, nature, quantity, concentration, storage location, storage measures and the disposal site of waste Hazardous Chemicals; ②Takes unified record for both production and treatment of waste Hazardous Chemicals (liquid, solid) as to prevent illegal abasement or loss; ③Disposal, temporary storage, declaration, disposal of waste Hazardous Chemicals should be taken by professionals, general discard and disposal at work are prohibited; ④Containers and packaging used for collection and storage of waste Hazardous Chemicals need to meet certain standards and be taken measures to prevent leakage during storage.

In order to further reduce waste and the impact on environment and natural resources, the Group has also adopted a variety of practices besides saving. For instance, in the *Regulations on Safety Management for Radioactive "Three Waste" of HTA Co., Ltd*, it requires the responsible unit to take all reasonable and feasible process improvement and management measures to minimise the generation of radioactive "Three Wastes" and reduce environmental pollution in daily production and scientific research. For the new construction, reconstruction, safety rectification, and decommissioning of radioactive workplaces, the relevant implementation units must fully implement the requirements of "Three Simultaneities" (the pollution prevention facilities in construction projects should be designed, constructed, and put into operation at the same time as the main construction work) in the process of project design and environmental projection assessment to ensure that the minimisation of "Three Wastes".

ENVIRONMENTAL RESPONSIBILITY (CONTINUED)

ENVIRONMENTAL PERFORMANCE DATA

	Data of 2019 ⁴	Unit
Resources utilisation		
Electricity consumption	8,184,646	kWh
Intensity of electricity consumption	265,394	kWh/100 million yuan
Purchased steam consumption	886	Tons
Intensity of purchased steam consumption	29	Tons/100 million yuan
Gasoline (mobile source) consumption	60,120	Liters
Intensity of gasoline (mobile source) consumption	2,505	Liters/per gasoline mobile
Diesel (mobile source) consumption	355,616	Liters
Intensity of diesel (mobile source) consumption	13,678	Liters/per diesel mobile
Total water consumption	45,112	Tons
Intensity of total water consumption	1,463	Tons/100 million yuan
Increment of packaging material	88,211	Tons
Increment intensity of packaging material	2,860	Tons/100 million yuan
Emission of air pollutants⁵		
NO _x emission	10,087	Kilograms
SO _x emission	6.75	Kilograms
CO emission	4,937	Kilograms
PM _{2.5} emission	248	Kilograms
PM ₁₀ emission	276	Kilograms

⁴ If there is no specific explanation on the scope of statistics, Environmental KPI of the Year covers data from headquarters of HTA, CNGT, Headway and BNIBT.

⁵ Air pollutants are generated by the vehicles, machinery and diesel generator. Calculations of air pollutants emission refer to *Technical Guideline for the Preparation of Road Vehicle Emission Inventory (Trial)* and *Technical Guidelines for the Preparation of Non-road Mobile Source Air Pollutant Emission Inventory (Trial)* published by the former Ministry of Environmental Protection of the People's Republic of China.

ENVIRONMENTAL RESPONSIBILITY (CONTINUED)

	Data of 2019 ⁴	Unit
Emission of greenhouse gas		
Emission of greenhouse gas ⁶ (scope 1)	1,615	Tons
Emission of greenhouse gas ⁷ (scope 2)	5,258	Tons
Greenhouse gas emission in total	6,873	Tons
Intensity of greenhouse gas emission in total	223	Tons/100 million yuan
Wastewater⁸ discharge		
Wastewater discharge	43,352	Cubic meters
Intensity of production wastewater discharge	1,406	Cubic meters/100 million yuan
Non-radioactive Waste⁹		
Treatment of Hazardous Chemicals	9.30	Tons
Treatment intensity of Hazardous Chemicals	0.30	Tons/100 million yuan
Generation of office paper	0.92	Tons
Generation intensity of office paper	0.08	Tons/100 million yuan
Amount of office paper recycled	0.03	Tons
Generation of domestic waste	65	Tons
Generation intensity of domestic waste	5.39	Tons/100 million yuan
Radioactive Waste		
Generation of radioactive gas	35,680,000	Cubic meters
Generation intensity of radioactive gas	1,156,954	Cubic meters/100 million yuan
Generation of radiation source	8,994	Pieces
Generation intensity of radiation source	292	Pieces/100 million yuan
Generation of low-level solid radioactive waste	69	Tons
Generation intensity of low-level solid radioactive waste	2.23	Tons/100 million yuan
Generation of low-level liquid radioactive waste	33	Cubic meters
Generation intensity of low-level liquid radioactive waste	1.06	Cubic meters/100 million yuan
Generation of intermediate-level solid radioactive waste	0.72	Tons
Generation intensity of intermediate-level of solid radioactive waste	0.02	Tons/100 million yuan

⁶ Greenhouse gases are generated by the vehicles, machinery, diesel generator and consumption of refrigerant. Calculations of greenhouse gas emission refer to *Reporting Guidance on Environmental KPIs* published by HKEX, *Guidelines for the Accounting and Reporting of Greenhouse Gas Emissions from Land Transport Companies (Trial)* published by the former Ministry of Environmental Protection of the People's Republic of China and *Guidelines for the Accounting and Reporting of Greenhouse Gas Emissions from Industrial Enterprises in Other Industries (Trial)* published by National Development and Reform Commission of the People's Republic of China.

⁷ Greenhouse gases are generated from consumption of purchased steam and electricity as indirect greenhouse gas emission. In order to use more accurate method, the calculation of greenhouse gas emission from purchased electricity is updated according to *Notice on the preparation of the carbon emission report and verification and emission monitoring plan in 2018* published by National Development and Reform Commission of the People's Republic of China. The calculation of greenhouse gas emission from purchased steam refers to *Guidelines for the Accounting and Reporting of Greenhouse Gas Emissions from Industrial Enterprises in Other Industries (Trial)* published by National Development and Reform Commission of the People's Republic of China.

⁸ Wastewater mainly includes domestic sewage and industrial water.

⁹ The main types of non-radioactive waste generated in the Year are Hazardous Chemicals, domestic waste and office paper. Due to the non-independent area where the project is located, Headway's data collection systems for domestic waste and office paper are being further improved. The data scope of domestic waste and office paper in the Report did not cover Headway. To remain the consistency of data scope, revenue of companies included in the scope of environmental KPI disclosure is used as denominator to calculate intensity for domestic waste and office paper.

PRODUCT RESPONSIBILITY

QUALITY CONTROL

The Group strictly complies with laws and regulations such as *Product Quality Law of the People's Republic of China*, *Pharmaceutical Administration Law of the People's Republic of China*, *Law of the People's Republic of China on Prevention and Control of Radioactive Pollution*, *Production Safety Law of the People's Republic of China*, *Regulation on the Safety and Protection of Radioisotopes and Radiation Devices*, *Regulation on the Administration of Transport Safety of Radioactive Articles*, *Measures for the Administration of Radioactive Pharmaceuticals*, *Regulation on the Safety Management of Hazardous Chemicals*, etc., which related to health, safety and methods of redress of the products and services. Accordingly, we formulated a series of internal management policies, such as *Post Responsibilities System of Safety Duty*, *Regulations on the Administration of Radioactive Items Transportation*, *Safety Electricity Management Regulations*, *Fire Safety Management Regulation*, *Regulations on Safety Management of Construction Projects*, *Responsibility System for Duty of Onsite Safety of Construction Project*, *Regulations of Safety Management for Special Equipment*, etc.



Picture: Certification of quality management system of CIRC

In terms of quality management, the guidelines of CIRC is “Integrity-based, Law-abiding Operation, Customer First, High Quality and Efficiency”. Documents related to product validation, monitoring activities and acceptance criteria include *Customer-related Process Control Procedure CIRC/QM-CX-14-2018*, *Procurement Management Control Procedure CIRC/QM. CX-07-2018*, and *Monitoring and Assessment Control Procedure CIRC/QM. CX-12-2018*. We stipulated that the Operation Department is responsible for the organisation of product and service design, product delivery and after-sales service control; the Safety and Quality Department is responsible for releases of products, inspections of measuring instruments, monitoring of measurement equipment, and implementations of monitoring and measurement activities. It is prohibited to provide products and delivery services to customers before the above mentioned arrangements have been successfully completed, unless the actions have been approved by the head of the Operation Department and the head of the Safety and Quality Department (if applicable, customer approval is also required).

PRODUCT RESPONSIBILITY (CONTINUED)

In terms of safety management, the Group has set up safety targets in all parts of production activities in its business. All members of the Group are actively adopting safety management systems to further safeguard operation and production safety. CNGT regulated clearly related content in its *Safety Management Protocol* includes working responsibilities, radiation safety management, general safety management, transportation safety management, accident emergency management, safety education and training, safety performance assessment, occupational health management, etc., and stipulated that the Safety Production Committee is the decision-making body for safety production and safety management, which is responsible for making decisions on major safety issues, organizing and revising the company-level safety management system, and carrying out safety inspections and safety technology improvements; besides, the Safety Production Committee should convene a special meeting on safety issues every three months. For works related to safety management of radioactive sources and radioactive materials, *Regulations on the Safety Management of Radioactive Sources and Radioactive Materials of HTA Co., Ltd.* regulated all units and subsidiaries shall establish safety management responsibility system on the basis of complying with relevant safety management regulations about purchasing, producing, selling, recycling, storing, transferring, importing, exporting and transporting radioactive sources and materials. The company uniformly implemented the approval system regarding procurement, borrowing, transfer, storage, and processing of radioactive raw materials and strictly prohibited all units (non-independent subsidiaries) of the company from performing these activities without the approval of the company's executive leader. In addition, in order to further strengthen the supervision of radioactive sources and materials, this regulation also requires companies and production units to encode the radioactive sources produced, and those without codes must not be sold. It is strictly forbidden to sell radioactive sources, devices containing radioactive sources and radiographic devices to units and individuals which have not been qualified. It also needs to make sure that all products sold have been approved by the local Environmental Protection Department where customers are located, and the goods are delivered in line with corresponding approval documents.



Picture: CIRC held the 2019 safety production standardisation training on 23 September 2019

Regarding the control and management of unqualified-products, CIRC has established and implemented the *Control Procedure for Unqualified-products CIRC/QM. CX-17-2018*. The disposal procedures of unqualified-products include ① Identifying, isolating, recording, filling out the *Unqualified-product Notification* and notifying the person in charge of the Operation Department and the Safety, Environmental Protection and Quality Department if unqualified-products are found in the warehouse verification process after being purchased; ② Designating relevant personnel for review according to the *Unqualified-products Notification*; ③ Reporting and approving the *Review and Disposal Form of Unqualified-products*; ④ Disposing of unqualified-products in accordance with approved disposal methods; ⑤ Notifying the Safety, Environmental Protection and Quality Department immediately if unqualified-products are generated due to improper storage. The department shall then fill out the *Review and Disposal Form of Unqualified-products* and report for examination and approval. During the Year, the Group did not receive any recalls of sold or shipped products for safety and health reasons.

PRODUCT RESPONSIBILITY (CONTINUED)

RESEARCH AND INNOVATION

The Group owns strong research and development strengths. Our research and development team comprises of 218 research and development staff, which focuses on the extensive researching and optimisation of production technologies, the development of new products and the safety and efficacy upgrading of existing products. The Group first conducts detailed market analysis and then strictly selects research and development projects according to its own advantages, industrial expertise and market demand. We have been proactively researching and developing various imaging diagnostic and therapeutic pharmaceuticals and are striving to fill in the gaps in the China therapy fields so as to meet the therapy demand. As of 31 December 2019, we owned eight imaging diagnostic and therapeutic radiopharmaceuticals under research and development, including one radiopharmaceutical pending approval for production (i.e. sodium iodine-131 capsule for therapeutic purpose), two radiopharmaceuticals at the stage of clinical trial (i.e. iodine-131-MIBG injection and sodium fluorine-18 injection), one therapeutic radiopharmaceutical pending application and approval for clinical trial (i.e. palladium-103 sealed source) and four imaging diagnostic and therapeutic radiopharmaceuticals under various stages of research and development.

Regarding the construction of the “1 + N” research and development platform system, the CIRC Research Institute continues to promote the development of five research and development centers including the center for radiopharmaceuticals, the center for stable isotopes and breath test technology, the center for precision medical testing, the center for radioactive sources and industrial applications, and the center for irradiation application technologies. Considering the construction of a team of leading talents in technological innovation, the postdoctoral research station completed the recruitment of the first batch of postdoctoral personnel; and the precision medicine laboratory research and development center introduced high-level talents. As a result, teams of scientific research talents in each center are growing constantly. During the Year, the Headway and BNIBT won the “Shenzhen Science and Technology Progress Award (Technology Development Category)” and “CNNC Science and Technology Award” respectively.



Picture: Headway won the “Shenzhen Science and Technology Progress Award (Technology Development Category)”



Picture: BNIBT won the “CNNC Science and Technology Award”

PRODUCT RESPONSIBILITY (CONTINUED)



Picture: CIRC held training session on knowledge system of products development from 4 to 6 June 2019

Strengthening the construction of intellectual property management system is an effective measure to enhance the core competitiveness of enterprises. The Group strictly complies with *Patent Law of the People's Republic of China*, *Copyright Law of the People's Republic of China*, *Regulation on National Defense Patent*, *Anti-unfair Competition Law of the People's Republic of China* and other relevant laws and regulations and has revised *Administrative Measures on Intellectual Property of CIRC* to regulate intellectual property protection mechanism. The policy clarifies the administrative structure for intellectual protection, duties of departments, belongs of intellectual property, administrative measures for intellectual protection and management, management approaches of patent and copyright, management of business secret and label, rewards and punishment of relevant duties members. During the Year, CIRC applied a total of 86 patents which included 26 patents for inventions, 31 licensed patents which included five patents for inventions and registered, and a total of five software copyrights.



Picture: Authorisation certificate of patent

PRODUCT RESPONSIBILITY (CONTINUED)

WIN-WIN COOPERATION

The Group is committed to building a responsible supply chain, and adhering to the principle of “Openness, Fairness, Justice, Merit Selection, Honesty and Trustworthiness, Standardisation and Efficiency, and Guarantee Supply”, as to establish relationships of mutual trust and win-win cooperation with suppliers. We have further formulated relevant systems, such as *the Administrative Measures for the Procurement in CIRC*, *the Administrative Measures for the Bidding in CIRC* and *the Administrative for the Non-bidding in CIRC*, on the basis of complying with relevant laws and regulations such as *the Bidding Law of the People’s Republic of China* and *Regulation on the Implementation of the Bidding Law of the People’s Republic of China*.

According to *the Administrative Measures for the Procurement in CIRC*, procurements should be carried out following the certain procurement plans; each member unit shall establish procedures of compiling and reviewing procurement plans, clarify the division of responsibilities, and achieve unified management of procurement plans. Implementations of procurement shall be in accordance with the approved procurement plans and procurement programs, as well as complying with the national laws and regulations and relevant regulations of CNNC. Theoretically, except for emergency procurement, procurement published on public resources trading platforms in accordance with relevant national regulations, procurement involving secrets, and procurement for small-sum and sporadic goods, all types of procurements should be published on CNNC’s electronic procurement platform (ecp.cnncc.com.cn) for online procurement.

In the process of evaluating suppliers, the Group also pays close attention to its performance on social responsibility and environmental responsibility, for example, *the Supplier Management Regulations of HTA Co., Ltd.* stipulates the methods assessing suppliers’ quality are divided into document review, on-site audit, written audit and sample test. The personnel participating in the onsite audit for material suppliers shall confirm the suppliers’ qualification, including whether there are Good Supply Practice for Pharmaceutical Products (GSP) certificate, Good Manufacturing Practice for Pharmaceutical Products (GMP) certificate, Quality Management System Certificate, Environmental Management System Certificate and Occupational Health and Safety Management System Certificate. Personnel for on-site quality audit of key raw and auxiliary materials should make records of the supplier’s plant and facilities, equipment, etc., which include ① Whether the plant layout is reasonable or not? Can it effectively prevent cross-contamination; ② Has the process water system, clean air conditioning system and key equipment been verified; ③ Whether the acceptance, sampling, inspection and release of raw and auxiliary materials meet the requirements; ④ Whether there is recovery of solvent and mother liquor has established corresponding quality standards in production management; ⑤ Whether the management of labeling and packaging meets the requirements; ⑥ Whether to use process water according to the process regulations, whether the process water meets quality standards, and whether it is regularly inspected and has inspection records, etc.

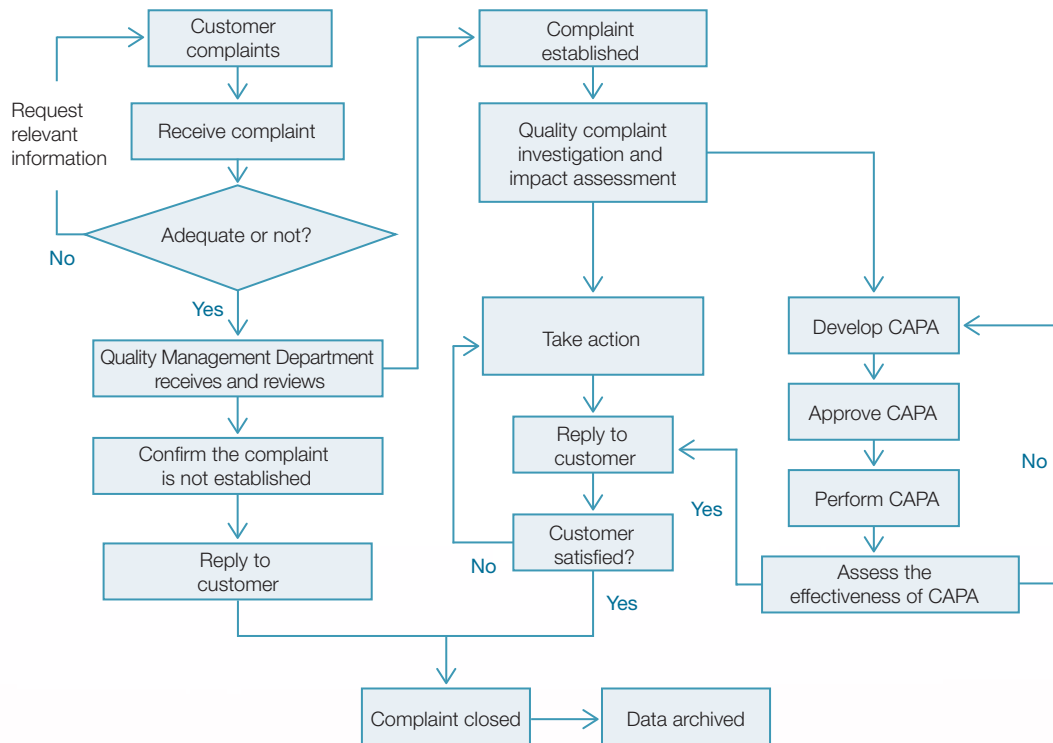
In order to realise an effective management of suppliers, the Group stipulates that each member unit should establish a supplier management model led by the Safety, Environmental Protection and Quality Department, Using Department, Purchasing Department, Warehousing Management Department and After-sales Service Department, and cooperate and share information with these departments; at the same time, each member unit should establish a dynamic and quantitative assessment management system for suppliers to clarify measures to deal with supplier defaults.

SERVICE RESPONSIBILITY

LISTEN TO CUSTOMERS' NEEDS

CIRC has developed a “driving industrial progress, benefiting mankind by using nuclear power” brand development concept and insists on satisfying the needs of customers and related parties as the purpose of company’s business activities. We accept opinions and suggestions from all parties humbly and improve the service continuously so as to provide higher level service. We have various channels, such as academic promotion, customer meeting and customer visit, to introduce products to customers, respond to customer inquiries, and accept information about product requirements from customers.

The Group has made specific provisions related to dealing with complaints on products and services from customers on the basis of providing enough information on products and services to customers. Taking the *Complaint Management Regulations* in Good Manufacturing Practice (GMP) of HTA and *Regulatory requirements for the Management of Customers Complaints* in Good Manufacturing Practice (GMP) of BNIBT as examples, the Group has ensured that users’ quality complaints are registered, evaluated, investigated and handled, while the management process of drug complaint is introduced to control potential risks and take timely measures to improve customers’ satisfaction.



Flowchart of handling complaints from users in GMP of BNIBT

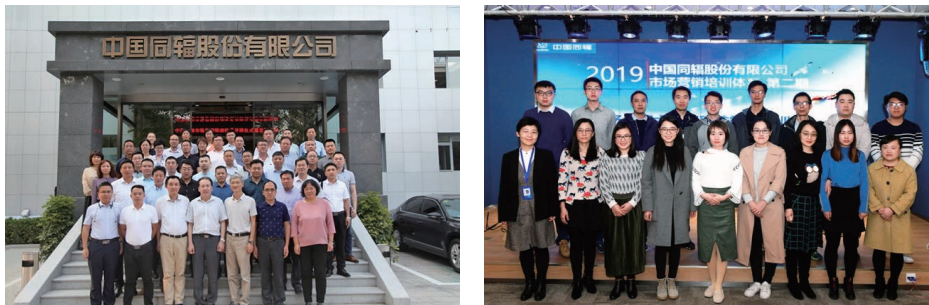
SERVICE RESPONSIBILITY (CONTINUED)

ABIDE BY INTEGRITY SERVICE

The Group adheres to the principle of operating with integrity and attaches great importance to the professional conduct of employees. With regards to advertisements, labels, privacy matters and methods of redress related to the products and services provided, the Group has formulated *Marketing Management Measures of CIRC (Trail)*, *Regulations for Privacy Management of CIRC*, and *Temporal Administrative Measures for Business Secret of CIRC* on the basis of strictly abiding by the laws and regulations such as *Advertising Law of the People's Republic of China*, *Trademark Law of the People's Republic of China*, and *Law of the People's Republic of China on Guarding State Secrets*, etc.

The marketing system of CIRC adopts a unified management approach. The Market Operation Department is responsible for the macro-market management of CIRC system while the sales management of each member unit are running sales management and market management for sales. As required in *Marketing Management Measures of CIRC (Trail)*, the marketing strategy plan should be objective, real, and operable. The Legal Affairs Department is responsible for providing policy support and reviewing the plan regarding marketing legality and compliance.

During the Year, we further strengthened and standardised the management of marketing such as advertisements and labels by providing trainings to the marketing and sale system of CIRC. The first and the second training were held on 3 to 4 September 2019 and 15 to 16 November 2019, respectively.



Picture: Training of marketing and sale system of CIRC in 2019

In terms of customer privacy protection, we have formulated *Regulations for Privacy Management of CIRC*, *Temporal Administrative Measures for Business Secret of CIRC* to ensure confidentialities of important information. CIRC abides by the principles of “Business Operators Responsible for Confidentiality” and “Confidentiality is implemented with Business”. We require that the labouring contract signed with employees should contain the provisions related to protection of business secrets and strictly control availabilities of business secrets; at the same time, we organise publicity, education and training activities of business secrets protection by taking various ways, as to cultivate confidentiality awareness and preventive skills of business secret management personnel and personnel who knows related business secrets.

As a daily office of CIRC confidentiality, the CIRC Confidentiality Office is positioned under the General Manager Executive Department. This office is responsible for organizing and carrying out education and training of business secret protection, confidentiality inspection, confidentiality technology protection, and investigation and handling of leaks in accordance with law. We stipulated that any exposures of national secrets and corporate business secrets through operational mistakes or slack management could lead to an investigation on a responsible person for legal liability or administrative sanction once the situation was identified.

RESPONSIBILITY IN EMPLOYMENT

SAFEGUARD EMPLOYEES' RIGHTS

The Group regards employees as important assets. We respect human rights, prohibit the employment of child labour and forced labour, oppose any form of discrimination, and protect the rights of employees by formulating detailed internal systems and establishing employee communication channels, in accordance with laws and regulations such as *the Labour Law of the People's Republic of China*, *the Labour Contract Law of the People's Republic of China*, *the Law of the People's Republic of China on the Protection of Minors* and *the Social Insurance Law of the People's Republic of China*. During the Year, the Group did not receive any violations of laws and regulations that are related to employees' recruitment, dismissal, salary, promotion, working hours, holidays, equal opportunities, diversity, and anti-discrimination.

<p>Labouring and employment</p>	<ul style="list-style-type: none"> <li style="margin-bottom: 20px;"> <p>➤ Recruitment and promotion:</p> <p>During the processes of recruitment and promotion, the Group follows the principle that ability is the core value, never discriminates against any candidate by gender, age, race, physical barriers, etc., and guarantees a fair competitive environment.</p> <p>We have formulated rules and regulations such as <i>the Administrative Measures for the Recruitment of Staff in the headquarter of CIRC</i>, <i>the Administrative Measures for Manager (Project Manager) of Headquarters of CIRC</i>, <i>Administrative Measures for Senior Manager (Senior Project Manager) of Headquarters of CIRC</i>, etc.</p> <li style="margin-bottom: 20px;"> <p>➤ Labour standards:</p> <p>Our employment procedures promote equal opportunities, diversity and anti-discrimination, and insist on legal employment and management according to law.</p> <p>The Group stipulates that applicants should be at least 18 years old. We resolutely prohibit employments of child labour and all kinds of forced labour. During the Year, the Group did not receive any violation or complaint about illegal child labour or forced labour that is significant to the Group.</p> <p>➤ Dismissal:</p> <p>Apart from relevant conditions that have been clearly stipulated (for example, according to <i>the Implementation Measures for the Qualification of the New Employees Becoming a Full-time Member in the Headquarter of CIRC</i>, we shall terminate the labour contract if new employees violate the national laws or regulations and receive penalties during probation period), the Group strictly prohibits unfair or unreasonable dismissal.</p>
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RESPONSIBILITY IN EMPLOYMENT (CONTINUED)

Working hours and holidays	<p>By formulating <i>the Regulations on the Management of Work Attendance in the Headquarter of CIRC</i>, we determine employees' working hours by adopting a weekly 40-hour working system and stipulate that employees could have sick leave, work-related injury leave, maternity leave, marriage and compassionate leave and paid annual leave, etc.</p>
Salary and benefits	<p>➤ Salary:</p> <p>We continuously strive to build and improve our salary system by considering factors such as the overall salary level of the industry and employee's work performance. The management will regularly review the Group's employee remuneration policy and arrangements.</p> <p>➤ Benefits:</p> <p>In addition to abiding by regulations in the areas of labour, insurance and welfare that are stipulated in <i>the Social Insurance Law of the People's Republic of China</i> and other relevant national and local laws and policies, we further provide employees with welfare, including retirement benefits scheme, medical and work-related injury insurance plan, and housing provident fund plan.</p>

RESPONSIBILITY IN EMPLOYMENT (CONTINUED)

As of the end of the Year, the total number of employees of the Group was 2,956, with 1,869 of them were male and 1,087 of them were female. The employee turnover rate was 3.68%. Please refer to the following table for detail information:

By Gender	Employee (People)	Percentage
Male	1,869	63.23%
Female	1,087	36.77%

By Age	Employee (People)	Percentage
Below 25 years old	421	14.24%
25-35 years old	1,092	36.94%
35-45 years old	804	27.20%
45-55 years old	480	16.24%
Above 55 years old	159	5.38%

By Type of Employment	Employee (People)	Percentage
Management	7	0.24%
Middle-level Staff	81	2.74%
General Staff	2,868	97.02%

By Education Background	Employee (People)	Percentage
Below Bachelor	1,324	44.79%
Bachelor	1,179	39.88%
Master	378	12.79%
Doctor	75	2.54%
Total	2,956	100%

RESPONSIBILITY IN EMPLOYMENT (CONTINUED)

By Birthplace	Beijing	Tianjin	Inner Mongolia	Ningxia	Hebei	Shanxi	Liaoning	Jilin	Gansu	Qinghai
Employee (People)	467	99	41	13	277	84	103	62	43	11
By Birthplace	Anhui	Shanghai	Heilongjiang	Shaanxi	Jiangsu	Zhejiang	Fujian	Jiangxi	Guizhou	Yunnan
Employee (People)	190	62	41	70	139	69	41	62	32	16
By Birthplace	Shandong	Henan	Guangdong	Sichuan	Hubei	Hunan	Guangxi	Hainan	Chongqing	
Employee (People)	124	142	108	292	116	95	57	44	56	

By Gender	Male			Female				
Employee Turnover (People)	71			42				
By Age	Below 30 years old		31-40 years old		40-50 years old		Above 51 years old	
Employee Turnover (People)	40		38		15		20	

By Birthplace	Beijing	Shaanxi	Guangdong	Sichuan	Chongqing	Hunan	Jiangsu	Hainan	Fujian	Gansu
Employee Turnover (People)	9	2	8	26	3	10	10	1	2	1
By Birthplace	Shandong	Henan	Jilin	Hebei	Liaoning	Foreign areas	Guangxi	Shanghai	Hubei	Shanxi
Employee Turnover (People)	4	9	2	12	2	1	4	1	4	2

RESPONSIBILITY IN EMPLOYMENT (CONTINUED)

CARING EMPLOYEES' HEALTH

The Group has been continuously making efforts to create a safe and guaranteed working environment for employees. In terms of providing a safe working environment and protecting employees from occupational hazards, the Group strictly complies with laws and regulations that have a significant impact on the Group, such as *the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases*, *the Production Safety Law of the People's Republic of China*, *the Regulation on the Safety and Protection of Radioisotopes and Radiation Devices*, *the Measures for the Administration of Safety and Protection for Radioisotopes and Ray Devices*, etc. Besides, we protect the health and safety of employees through measures including system construction, paying attention to employees' physical and mental health, and raising employees' awareness, etc.

System construction	We set out measures for managing occupational health and safety which is detailed in <i>the Administrative Measures for Occupational Health of CIRC</i> , and strengthen the prevention, control and elimination of occupational hazards in the processes of scientific research and production, so as to protect health and related rights of employees.
Paying attention to employees' physical and mental health	<ul style="list-style-type: none"> ➤ The Group regularly conducts occupational health examinations for radioactive workers and equips employees with personal dose film at the workplace; ➤ We organise activities such as sports games and employee autumn tours to alleviate the pressure of employees, and create an atmosphere in which employees care and respect each other.
Improve employees' awareness	We organise a series of trainings to improve employees' awareness and ability of self-protection. By learning relevant knowledge and emergency measures, employees' vigilance and ability to exercise rights to health protection are improved.

RESPONSIBILITY IN EMPLOYMENT (CONTINUED)

In terms of occupational health management, we require that units having occupational hazards must carry out workplace monitoring and personal monitoring. The results of personal dose monitoring on occupational exposure should be properly preserved, copied and handed to the Safety, Environmental Protection and Quality Department of CIRC. During the Year, the Group did not have any accidents due to work-related deaths or working days lost due to work-related injuries.



Picture: Staff Badminton Competition of CIRC was held on 11 August 2019



Picture: Beijing CIAE-RIAR Radioisotope Technology Co., Ltd. organised on-site training on fire safety on 5 September 2019

RESPONSIBILITY IN EMPLOYMENT (CONTINUED)

SUPPORTING EMPLOYEES' DEVELOPMENT

The Group regards employees as one of the most important assets for maintaining core competitiveness. Therefore, we actively construct and optimise management policies and development training plans for employees. In terms of policies to enhance employees' knowledge and skills on performing their duties, we formulated *the Administrative Measures for Education and Training in CIRC* according to *Administrative Measures for Education and Training of cadres in China National Nuclear Corporation* and related regulations, which has duly integrated strategy in talent development and employees' personal interests.



Picture: CIRC held the training for new employees in 2019

RESPONSIBILITY IN EMPLOYMENT (CONTINUED)



Picture: CIRC held the 2019 Youth Innovation Report Seminar and Creative Thinking Training in Shenzhen, from 25 to 27 November 2019

In order to broaden and deepen employees' understanding of professional knowledge and improve employees' professional skills, the Group has organised a series of training activities, including new employee induction training, safety production standardisation training, creative thinking training, etc. During the Year, the number of employees trained by the Group was 1,668, 1,035 of them were male and 633 of them were female. Please refer to the following table for detail information on training:

Data	By Gender		By Employee Category		
	Male	Female	Management	Middle-level Staff	General Staff
Ttrained Employee (%)	55.38%	58.23%	100%	91.36%	55.33%
Average Training Hours Per Employee (hours)	181.30	160.00	200.83	90.34	176.96

COMMUNITY RESPONSIBILITY

COMMUNITY SERVICE

While paying attention to the development of the enterprise itself, the Group also cares for the needs of the community by participating in and carrying out activities such as co-construction of harmonious communities, to actively promote the improvement of people’s livelihoods and economic development. During the Year, apart from abiding by *Law of the People’s Republic of China on Donations for Public Welfare*, the Group actively responds to *Administrative Measures for External Donations of CNNC*, which stipulates that all units that directly or indirectly under the Group must honestly carry out donations that have been approved through internal decision-making procedures. Any false propaganda or promise is strictly prohibited. The types of external donations are “relief donations”, “public welfare donations” and “other donations”.

Relief donations	<ul style="list-style-type: none"> That is, donations which shall be used in production, livelihood relief and succor for people suffering from natural disasters, or living in old, ethnic, frontier and impoverished regions identified by the state or designated aid areas, as well as other vulnerable groups and individuals;
Public welfare donations	<ul style="list-style-type: none"> That is, donations which shall be used in social welfare undertakings such as education, science and health, environmental protection, energy conservation and emission reduction;
Other donations	<ul style="list-style-type: none"> That is, apart from the above-mentioned categories, donations for other public and welfare undertakings aiming at promoting humanism or social development, as well as fulfilling CNNC’s social responsibilities;



Picture: CIRC aided the project of equipment for Huawan Kindergarten in Lengshui Town, Baihe County



Picture: CIRC donated 100,000 yuan to the Central Primary School of Chiyan Town, Xunyang County

COMBATING EPIDEMIC AND SUPPORTING DISASTER RELIEF

Given the significance and widespread concern of the coronavirus disease, and as a responsible enterprise, the Group will report our detailed work in response to this disease to all stakeholders in an open, transparent and timely manner, even though it did not happen within the Year. Since the outbreak of the coronavirus disease, CIRC has resolutely implemented the spirit of General Secretary Xi’s important instructions, the decisions and deployment of the Central Committee of the Communist Party and the State Council of the People’s Republic of China, and considered us in the same boat with the hard-working healthcare workers and medical institutions. CIRC donated all anti-epidemic materials to Hubei province on 13 March 2020. In this donation event, CIRC donated a total of 2,000 sets of medical protective clothing, 16,000 N95 medical masks and 38,000 medical disposable masks to Hubei province, with a total value of about 1 million yuan, aiming to continuously contribute to front-line supplies support.

COMMUNITY RESPONSIBILITY (CONTINUED)

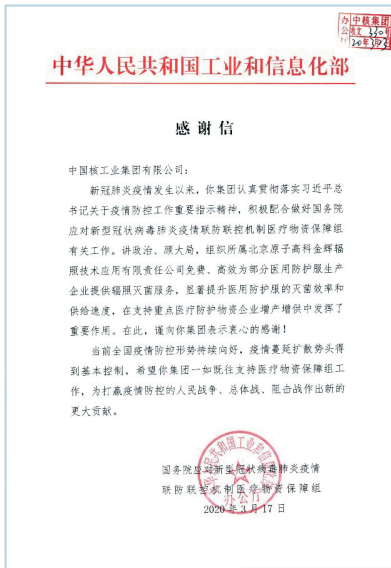
During the anti-epidemic period, CIRC not only organised the Technology Lecture by inviting experts to give online lectures on special topics such as nuclear medicine diagnosis and treatment, expert consensus on safety prevention and control, etc., to support learning and communication between nuclear medicine workers, but also actively fulfill the social responsibilities by making use of our technical and professional advantages in nuclear medicine.

Our story of combating epidemic and supporting disaster relief:

Cope with the coronavirus disease by using irradiation technology

Jinhui Radiation, a subsidiary of CIRC, has completed the first batch of radiation sterilisation services for medical protective clothing since 12 February 2020, it had completed the irradiation sterilisation of about 1.48 million sets of disposable medical protective clothing, and the daily maximum number of protective clothing sterilisation had reached more than 80,000 sets as of 24 March, 2020.

On 13 February, 27 February and 17 March 2020, the General Office of State-owned Assets Supervision and Administration Commission of the State Council, the Technology Division of the Ministry of Industry and Information Technology of the People's Republic of China and the Medical Supplies Group of the Joint Prevention and Control Mechanism of the State Council in Response to the Novel Coronavirus Pneumonia appreciated CIRC's radiation sterilisation services for combating the epidemic in Wuhan district respectively. During this period, the CCTV-News, the International Irradiation Association (IIA) and CNNC reported on the use of irradiation technology for the emergency response to the coronavirus disease.



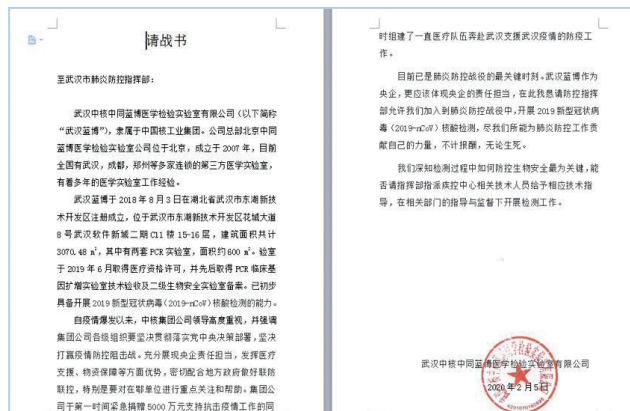
COMMUNITY RESPONSIBILITY (CONTINUED)

Pay tribute to the countermarch people of CIRC

By making active efforts, Wuhan Zhongtong Lanbo, a subsidiary of CIRC, became the eighth batch of nucleic acid testing units in Hubei Province on 26 February 2020. This was approved by the Medical Treatment and Prevention Group of the Coronavirus Prevention and Control Command of Hubei.

Facing the severe challenge of the epidemic, Mr. Hong Wei, the general manager of Wuhan Zhongtong Lanbo, submitted a petition and resolutely decided to take the lead to return to Wuhan with other employees, including Lu Yu and Huang Ping, to combat the coronavirus together. They demonstrated the mission and responsibility of "CIRC People" with their actual actions. We are paying tribute to these countermarch people.

By 10 April 2020, Wuhan Zhongtong Lanbo had expanded its testing capacity from 500 cases per day to 3,000 cases per day and had accumulatively tested more than 16,000 cases.



APPENDIX: INDEX OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE

Aspect	Indicator No.	Indicator Description	Disclosures	Chapters/ Remarks
Environmental				
A1: Emissions	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	✓	Environmental Responsibility
		relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste		
	A1.1	The types of emissions and respective emissions data	✓	Environmental Responsibility
	A1.2	Greenhouse gas emissions in total and, where appropriate, intensity	✓	Environmental Performance Data
	A1.3	Total hazardous waste produced and, where appropriate, intensity	✓	Environmental Performance Data
	A1.4	Total non-hazardous waste produced and, where appropriate, intensity	✓	Environmental Performance Data
	A1.5	Description of measures to mitigate emissions and results achieved	✓	Environmental Responsibility
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	✓	Refined Emission Management

APPENDIX: INDEX OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

Aspect	Indicator No.	Indicator Description	Disclosures	Chapters/ Remarks
A2: Use of Resources	General Disclosure	Policies on the efficient use of resources	✓	Advocating Resource Conservation
	A2.1	Direct and/or indirect energy consumption by type in total and intensity	✓	Environmental Performance Data
	A2.2	Water consumption in total and intensity	✓	Environmental Performance Data
	A2.3	Description of energy use efficiency initiatives and results achieved	✓	Environmental Responsibility
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	✓	No difficulty in sourcing water Environmental Responsibility
	A2.5	Total packaging material used for finished products and, if applicable, with reference to per unit produced	✓	Environmental Performance Data
A3: Environmental and Natural Resources	General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources	✓	Environmental Responsibility
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	✓	Environmental Responsibility

APPENDIX: INDEX OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

Aspect	Indicator No.	Indicator Description	Disclosures	Chapters/ Remarks
Social				
B1: Employment	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	✓	Safeguard Employees' Rights
	B1.1	Total workforce by gender, employment type, age group and geographical region	✓	Safeguard Employees' Rights
	B1.2	Employee turnover rate by gender, age group and geographical region	✓	Safeguard Employees' Rights
B2: Health and Safety	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	✓	Caring Employees' Health
	B2.1	Number and rate of work-related fatalities	✓	Caring Employees' Health
	B2.2	Lost days due to work injury	✓	Caring Employees' Health
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	✓	Caring Employees' Health

APPENDIX: INDEX OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

Aspect	Indicator No.	Indicator Description	Disclosures	Chapters/ Remarks
B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	✓	Supporting Employees' Development
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	✓	Supporting Employees' Development
	B3.2	The average training hours completed per employee by gender and employee category	✓	Supporting Employees' Development
B4: Labour Standards	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	✓	Safeguard Employees' Rights
	B4.1	relating to preventing child and forced labour Description of measures to review employment practices to avoid child and forced labour	✓	Safeguard Employees' Rights
	B4.2	Description of steps taken to eliminate such practices when discovered	✓	No incidents related to child or forced labour occurred Safeguard Employees' Rights
B5: Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain	✓	Win-win Cooperation
	B5.1	Number of Suppliers by geographical region	Will plan for disclosure in the future	
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	✓	Win-win Cooperation

APPENDIX: INDEX OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

Aspect	Indicator No.	Indicator Description	Disclosures	Chapters/ Remarks
B6: Product Responsibility	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	✓	Product Responsibility Service Responsibility
	B6.1	relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress Percentage of total products sold or shipped subject to recalls for safety and health reasons	✓	Quality Control
	B6.2	Number of products and service related complaints received and how they are dealt with	✓	Listen to Customers' needs
	B6.3	Description of practices relating to observing and protecting intellectual property rights	✓	Research and Innovation
	B6.4	Description of quality assurance process and recall procedures	✓	Quality Control
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	✓	Abide by Integrity Service

APPENDIX: INDEX OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

Aspect	Indicator No.	Indicator Description	Disclosures	Chapters/ Remarks
B7: Anti-corruption	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	✓	Fighting Corruption and Upholding Integrity
	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases	✓	Fighting Corruption and Upholding Integrity
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	✓	Fighting Corruption and Upholding Integrity
B8: Community Investment	General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests	✓	Community Responsibility
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport)	✓	Community Responsibility
	B8.2	Resources contributed (e.g. money or time) to the focus area	✓	Community Responsibility



中國同輻股份有限公司
China Isotope & Radiation Corporation