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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

2024

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

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釋義 DEFINITIONS

若沒有特殊説明,有關辭彙的定義如下 Unless otherwise stated, these terms are defined as follows: 所示:

中國 China	中華人民共和國 People's Republic of China
香港 Hong Kong	中華人民共和國香港特別行政區 Hong Kong Special Administrative Region of the People's Republic of China
聯交所 SEHK	香港聯合交易所有限公司 The Stock Exchange of Hong Kong Limited
上市規則 Listing Rules	《香港聯合交易所有限公司證券上市規則》 The Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited
ESG指引	《香港聯合交易所有限公司證券上市規則》附錄C2《環境、社會及管治報告指 引》
ESG Reporting Guide	The Environmental, Social and Governance Reporting Guide set out in Appendix C2 of the Listing Rules
國資委 SASAC	國務院國有資產監督管理委員會 State-owned Assets Supervision and Administration Commission of the State Council
央企ESG報告指標體系 ESG Reporting Indicators System for Central State-Owned Enterprises	《央企控股上市公司ESG專項報告參考指標體系》 Reference of ESG Indicators System for ESG Reports of Listed Companies Controlled by Central Enterprises
央企ESG報告參考模板 ESG Reporting Reference Template for Central State-Owned Enterprises	《央企控股上市公司ESG專項報告參考模板》 Reference Template for ESG Reports of Listed Companies Controlled by Central Enterprises
本報告 The Report	中國同輻股份有限公司2024年度環境、社會及管治報告 China Isotope & Radiation Corporation's 2024 Environmental, Social and Governance Report
ESG ESG	環境、社會及管治 Environmental, Social and Governance
本年度、報告期 The Year, the Reporting Period	2024年1月1日至2024年12月31日 From January 1, 2024 to December 31, 2024

釋義 (續) DEFINITIONS (CONTINUED)

本公司	中國同輻股份有限公司
The Company	China Isotope & Radiation Corporation
中國同輻、本集團、我們	中國同輻股份有限公司及其附屬公司
CIRC, the Group, or we	China Isotope & Radiation Corporation and its subsidiaries
中核集團	中國核工業集團有限公司
CNNC	China National Nuclear Corporation
原子高科	原子高科股份有限公司
HTA	HTA Co., Ltd.
中核海得威	深圳市中核海得威生物科技有限公司
Headway	Shenzhen Zhonghe Headway Bio-Sci & Tech Co., Ltd.
中核高通	成都中核高通同位素股份有限公司
CNGT	Chengdu Gaotong Isotope Co., Ltd. (CNGT)
中核高能	中核高能(天津)裝備有限公司
CNNCHE	CNNC High Energy Equipment (Tianjin) Co., Ltd.
中核安科鋭	中核安科鋭 (天津) 醫療科技有限責任公司
CNNC ACCURAY	CNNC Accuray (Tianjin) Medical Technology Co., Ltd.
NO _x	氮氧化物
NO _x	Nitrogen Oxides
SO _x	硫氧化物
SO _x	Sulphur Oxides
PM	懸浮顆粒物
PM	Particulate Matter
危化品	廢棄危險化學品
Hazardous Chemicals	Hazardous Chemical Waste
EB固化	電子束固化(Electron beam curing)
EB Curing	Electron Beam Curing
IAEA	國際原子能機構(International Atomic Energy Agency) International Atomic Energy Agency

關於本報告 ABOUT THIS REPORT

本集團欣然向各界呈獻第七版環境、社會 與治理(ESG)專題報告,該文件系統性披 露本集團於2024年在可持續發展領域的 戰略佈局、創新實踐與關鍵成果。本年度 報告延續「價值共享」核心原則,深度融 合聯交所《ESG指引》及國資委《央企ESG 報告參考模板》《央企ESG報告指標體系》 框架要求,除完整闡述環境保育、社會共 融及集團治理三大維度的階段性進展外, 更針對機構投資者、供應商及社區成員等 關鍵利益相關方關切的實質性議題進行專 章回應。為全面了解本集團《2024年度報 告》中「企業管治報告」章節一併閲覽。

關於中國同輻

自1983年成立以來,作為中國核技術應 用產業的驅動者,中國同輻將建設「核工 業強國」、「健康中國」作為雙重使命,是 中核集團面向人民生命健康科技進軍的主 力和先進核科技成果轉化的主通道。本集 團深耕行業42年,聚焦核醫療健康和輻 照應用兩大產業方向,是國內集研發、生 產、銷售集服務於一體的核技術應用龍頭 企業,同時也是中國唯一一家涵蓋輻照站 選址、設計、建造、供源、退役等的全過 程服務提供商。 The Group is pleased to present the seventh edition of its Environmental, Social, and Governance (ESG) Report, which systematically discloses the Group's strategic initiatives, innovative practices, and key achievements in sustainability during the year 2024. This year's report upholds the core principle of "Shared Value Creation" and rigorously integrates the framework requirements of the HKEX ESG Guide, the SASAC's ESG Reporting Reference Template, and the ESG Reporting Indicators System for Central State-Owned Enterprises. Beyond comprehensively detailing progress across environmental conservation, social inclusion, and corporate governance, the Report dedicates specific chapters to address material issues of concern to key stakeholders, including institutional investors, suppliers, and community members. To gain a holistic understanding of the Group's ESG performance, the Report should be read in conjunction with the "Corporate Governance Report" section of the Group's 2024 Annual Report.

ABOUT THE GROUP

Since its establishment in 1983, as a driving force in China's nuclear technology application industry, CIRC has taken on the dual mission of building a "strong nuclear industry nation" and a "healthy China." As a core entity under the China National Nuclear Corporation (CNNC), CIRC acts as the primary force in translating cutting-edge nuclear science and technology into solutions for public health and the main conduit for commercializing advanced nuclear innovations. Over its 42-year history, the Group has focused on two strategic pillars: nuclear medical health and irradiation applications. It has emerged as China's leading nuclear technology enterprise integrating R&D, production, sales, and service capabilities. CIRC is also the sole comprehensive service provider in China offering end-to-end solutions for irradiation source supply, and decommissioning.

積極投身核技術應用產業主戰場,已發展 成為中國領先的診斷及治療用放射性藥品 製造商,主要的醫用及工業用放射源產品 製造商,以及中國放射源產品品種最為齊 全的生產商,成為中核集團進軍人民生命 健康領域的主力和科技成果轉化的主要通 道,逐步向國家知名的同位素與輻射技術 應用產品和服務供應商邁進。

本集團聚焦核醫療健康和輻照應用兩大產 業領域,致力於提供核醫學整體解決方 案、放療整體解決方案以及輻射技術推廣 應用,形成以核素、核藥、核醫療裝備、 核醫學整體解決方案、放射源及應用、輻 照應用等6大業務為核心的「6+N」產業佈 局。在基礎業務方面,集團持續向國內醫 療機構穩定供應放射性診療藥劑,並藉由 支持中華醫學會核醫學分會專業平台建 設,加速核醫學技術在臨床科室的普及化 應用,有效鞏固現有市場基本盤。在產業 拓展層面,推進與美國安科鋭的深度技術 合作,針對螺旋斷層放射治療系統及立體 定位放射外科手術機械人等尖端設備,建 立從引進消化到自主創新的完整技術升級 路徑,顯著提升在核醫療裝備生態鏈的話 語權。

The Group has actively engaged in the forefront of nuclear technology application industries, evolving into China's leading manufacturer of diagnostic and therapeutic radiopharmaceuticals, a primary producer of medical and industrial radioactive source products, and the nation's most comprehensive supplier of radioactive source variants. It has become the main force of CNNC to enter the field of people's life and health, while performing as the main channel for the transformation of scientific and technological achievements. The Group is progressing steadily towards becoming a nationally renowned supplier of isotope and radiation technology application products and services.

Focusing on two core industrial domains - nuclear medical health and irradiation applications - the Group is dedicated to delivering integrated nuclear medicine solutions, comprehensive radiotherapy solutions, and radiation technology promotion. This has culminated in a "6+N" industrial framework centered on six core businesses: isotopes, radiopharmaceuticals, nuclear medical equipment, integrated nuclear medicine solutions, radioactive sources and applications, and radiation technology applications. In foundational operations, the Group maintains stable supply of radioactive diagnostic and therapeutic agents to domestic medical institutions. By supporting the development of professional platforms such as the Nuclear Medicine Branch of the Chinese Medical Association, it accelerates the clinical adoption of nuclear medical technologies, solidifying its market leadership. At the industrial expansion level, the Group advances in-depth technical collaboration with American Accuray, establishing a complete innovation pathway - from technology absorption to independent R&D - for cutting-edge equipment such as helical TOMO therapy systems and stereotactic radiosurgery robotic systems, significantly enhancing its influence within the nuclear medical equipment ecosystem.

相較於2023年度,中國同輻於2024年度 在核醫學創新研發領域實現里程碑式突 破:成功推動國內首款PET骨顯影劑「氟 化鈉注射液」獲批上市,填補分子影像診 斷領域關鍵技術空白。亦同步推進多款新 型放射性藥物進入臨床試驗階段,其中 「尿素碳-13呼氣試驗藥盒」憑藉微型化規 格設計通過臨床審批:在核素自主化生產 方面,實現無載體鑥-177的大規模國產化 製備能力,並完成「鍺鎵發生器」試製程 驗證與量產準備。在高端醫療裝備國產替 代進程中,自主研製的伽瑪刀放射治療系 統與Tomo C型號設備雙雙取得市場准入 資格。

中國同輻充分發揮中核集團全產業鏈戰略 協同效應,深度整合母公司在核技術應用 領域的頂級基礎設施與科研資源。依托中 核集團體系內運營中的多座核反應堆群、 高能迴旋加速裝置群組,以及國家級核素 製備實驗室等戰略性資產,中國同輻構建 起涵蓋同位素原料生產、輻照技術研發到 終端應用的垂直整合優勢,加速相關產品 研發國產化,填補國內空白。 Compared with the year 2023, CIRC achieved milestone breakthroughs in nuclear medicine innovation in 2024: Secured regulatory approval for China's first PET bone imaging agent "Fluoride Sodium Injection", addressing critical gaps in molecular imaging diagnostics; Advanced multiple novel radiopharmaceuticals into clinical trials, including the "Carbon-13 Urea Breath Test Kit" with miniaturized specifications approved for clinical use; Achieved large-scale domestic production capacity for carrier-free lutetium-177 and completed pilot validation and mass-production preparations for "Germanium-68/Gallium-68 generators"; Obtained market access certifications for gamma knife radiotherapy systems and Tomo C-series equipment, accelerating domestic substitution of high-end medical devices.

Leveraging CNNC's full-industry-chain strategic synergies, CIRC deeply integrates its parent company's top-tier infrastructure and R&D resources in nuclear technology applications. By harnessing CNNC's operational nuclear reactor clusters, high-energy cyclotron facilities, and national-level isotope production laboratories, CIRC has established vertically integrated capabilities spanning isotope raw material production, radiation technology R&D, and end-user applications. This accelerates the localization of critical product development and addresses domestic supply chain gaps.

報告範圍

本報告所披露的內容及關鍵績效指標由本 集團於中國內地的核心業務擴大至業務 全口徑¹。若無另行説明,本報告時間範 圍與本集團《2024年度報告》一致,涵蓋 2024年1月1日至2024年12月31日。

編製基準

本集團依照聯交所最新ESG指引編製本報 告。本報告遵守ESG指引中有關強制披 露規定以及「不遵守就解釋」的條文,並 且以「重要性」、「量化」、「平衡」、「一致 性」四項匯報原則作為編製基礎。

REPORTING SCOPE

The disclosures and KPIs in this Report are expanded from the Group's core business in Mainland China to the full scope of the business¹. Unless stated otherwise, the Reporting Period aligns with the Group's 2024 Annual Report, spanning from January 1, 2024 to December 31, 2024.

REPORTING GUIDELINE

The Group compiled the Report in accordance with the latest ESG Reporting Guide from the SEHK. The Report adheres to the mandatory disclosure requirements and the "comply or explain" provisions outlined in the ESG Reporting Guide, and it is structured based on four reporting principles: "Materiality", "Quantitative", "Balance", and "Consistency".

原則	集團的回應	
Principles	The Group's response	
重要性	本集團通過問卷調查的形式收集利益相關方的意見,並進行實質性議題評估,從而 識別當前重大的ESG議題。	
Materiality	The Group collects stakeholders' opinions through questionnaires and conducts	
	materiality assessments to identify current material ESG issues.	
量化	在可行情況下,以量化方式披露本集團的環境和社會績效指標,提供詳細説明及可 出數據	
	比數據。	
Quantitative	Where feasible, the Group discloses its environmental and social performance	
	indicators in a quantitative manner, providing detailed explanations and comparable	
	data.	
平衡	本集團已識別對於其業務有重大影響的實質性議題。本報告以客觀事實為基礎,全	
	面披露本集團在ESG方面的績效表現及影響。	
Balance	The Group has identified material issues that have significant impacts on its	
	business. The Report comprehensively discloses the Group's performance and	
	impact on ESG based on objective facts.	
一致性	本集團已使用一致的披露統計方式,令ESG數據日後可作有意義的比較。已在本報	
2012	告中對更新的統計方式及匯報範圍進行特別説明,即在附註中解釋以供讀者參考。	
Ormaintenau		
Consistency	The Group has used consistent methodologies to allow for meaningful	
	comparisons of ESG data over time. If there is any change in the methods used	
	and scope of reporting, it shall be explained in the notes for readers' reference.	

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本年度報告環境關鍵績效披露範圍擴大 至與《2024年年度報告》一致:2023年 度報告環境關鍵績效披露範圍為原子高 科、中核海得威、中核高通、中核高能 及中核安科鋭。 The Year's environmental KPIs have been expanded to align with the scope of the 2024 Annual Report. In the 2023 ESG Report, environmental KPI disclosures covered five subsidiaries: HTA, CNNC Headway, CNGT, CNNCHE, and CNNC ACCURAY.

報告獲取

本報告以中文繁體及英文進行編寫及發佈。報告內容如有歧義,請以中文繁體 版為準。您可以於本集團的官方網站 (https://www.circ.com.cn)或香港交易 及結算所有限公司網站(https://www. hkexnews.hk/index_c.htm)瀏覽和下載本 報告的電子版本。如對本報告有任何疑問 或建議,歡迎 閣下通過電郵方式(電郵 地址:ir@circ.com.cn)與我們聯絡。

ACCESS TO THE REPORT

The Report is prepared and published in Traditional Chinese and English. Should there be any inconsistency, the Traditional Chinese version shall take precedence. You can access and download the electronic version of the report from the Group's official website (https://www.circ.com.cn) or the website of Hong Kong Exchanges and Clearing Limited (https://www.hkexnews. hk/index.htm). If you have any inquiries or recommendations regarding the Report, please feel free to contact us via email at ir@circ.com.cn.

可持續發展管理 SUSTAINABLE DEVELOPMENT MANAGEMENT

ESG管治架構

作為一家肩負社會責任的中國企業,中國 同輻在基礎合規管理之外,更積極完善 ESG治理架構,全面提升可持續發展管理 水準。董事會作為ESG事務的最高治理與 監督機構,高度重視相關工作的推進,負 責決策、審議及審查環境、社會及治理與 題的策略、政策與制度,並監督計劃的執 行情況。此外,董事會將ESG工作納入 集團的日常風險管理流程,確保其與企業 經營深度融合。為進一步落實ESG治理職 能,董事會授權審計與風險管理委員會及 ESG工作小組協助董事會管理ESG事宜, 提供專業支援並監督相關工作的執行成 效,為集團的可持續發展提供堅實保障。

董事會下設審計與風險管理委員會,該委員會由三名董事組成。在日常運營中依據 《董事會審計與風險管理委員會工作細則》 規定,對ESG相關事宜進行審計及監督。 主要職責包括:

- 審議ESG工作的管理方針、目標及 策略;
- 定期檢討ESG相關風險與機遇,評 估相關風險及機遇對公司業務的影響程度;
- 審議ESG實質性議題及行動進展;
- 審議年度ESG報告並提交董事會批 准,持續推進信息披露質量提升;

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 定期就委員會對ESG相關的重大決 策或提出的建議向董事會報告。

ESG GOVERNANCE FRAMEWORK

As a socially responsible Chinese enterprise, CIRC goes beyond foundational compliance to actively refine its ESG governance framework and holistically elevate sustainable development management standards. The Board of Directors (the "Board"), serving as the supreme governance and oversight body for ESG affairs, prioritizes the advancement of related initiatives. It is responsible for decision-making, deliberation, and review of strategies, policies, and systems addressing environmental, social, and governance issues, while monitoring the execution of corresponding plans. Furthermore, the Board integrates ESG responsibilities into the Group's daily risk management processes, ensuring seamless alignment with business operations. To further operationalize ESG governance functions, the Board delegates authority to the Audit and Risk Management Committee and the ESG Working Group to assist in managing ESG matters. These bodies provide professional support, oversee implementation efficacy, and deliver robust safeguards for the Group's sustainable development.

The Board has established an Audit and Risk Management Committee, comprising three Directors. In accordance with the Working Rules for the Board Audit and Risk Management Committee, the Committee conducts audits and oversight of ESG-related matters during routine operations. Key responsibilities include:

- Reviewing ESG management principles, objectives, and strategies;
- Regularly assessing ESG-related risks and opportunities, evaluating their potential impact on business operations;
- Deliberating material ESG topics and monitoring progress on action plans;
- Reviewing the annual ESG report and submitting it to the Board for approval, driving continuous enhancement of disclosure quality;
- Reporting periodically to the Board on significant ESGrelated decisions or recommendations proposed by the Committee.

集團在ESG具體工作層面設置了ESG工 作小組,組長由中國同輻高級管理人員擔 任,成員為各職能部門負責人。除了明確 各職能部門所負責的ESG相關工作,ESG 工作小組的主要職責還包括:

- 制定ESG政策及年度ESG工作方 針、行動計劃及目標初稿;
- 組織內外部利益相關方的日常溝
 通;
- 檢視所識別出的ESG實質性議題;
- 組織各部門和附屬公司進行ESG信息收集;
- 組織撰寫及審閱ESG報告;
- 定期向董事會審計與風險管理委員 會匯報各項ESG工作的落實情況並 提供建議方案,供討論和審批。

The Group has set up an ESG Working Group at the level of specific ESG work, which is chaired by a senior executive of CIRC and composed of the heads of each functional department. In addition to clarifying the ESG-related work that each functional department is responsible for, the main duties of the ESG Working Group also include:

- Developing ESG policies and ESG working guidelines, action plan and targets;
- Organizing daily communication between internal and external stakeholders;
- Reviewing the identified material ESG topics;
- Organizing the collection of ESG information from various divisions and subsidiaries;
- Organizing the writing and review of the ESG report;
- Reporting regularly to the Audit and Risk Management Committee under the Board of Directors on the implementation of various ESG efforts and providing recommended solutions for discussion and approval.

為確保董事會能夠及時掌握並有效管理 ESG工作的執行情況,集團每年度向董事 會進行至少2次相關匯報: To ensure that the Board of Directors is able to keep abreast of and effectively manage the implementation of ESG efforts, the Group makes at least 2 relevant reports to the Board of Directors each year:

以董事會議案形式匯報ESG年度報告

Reporting of the ESG report in the form of a board motion

集團將ESG年度報告以董事會議案的形式提交董事會,詳細匯報ESG工作的整體進展、目標達成情況及未來計劃,並由董事會審議批准,確保ESG工作與公司戰略目標保持一致。
 The Group submits the ESG report to the Board of Directors in the form of a Board motion to report in detail the overall progress of the ESG work, the achievement of targets and future plans, which is considered and approved by the Board of Directors to ensure that the ESG work is aligned with the Company's strategic objectives.

以非會議形式匯報ESG實質性議題及風險庫情況 Reporting on material ESG topics and risk library in an unconference format

 集團還通過非召開董事會會議的形式,向各位董事報告公司的ESG實質性議題、ESG風險庫情況 及相關工作進展。此舉旨在讓董事及時了解ESG領域的最新動態及潛在風險,為其決策提供全面 支持。

The Group also reports to the Directors on the Company's material ESG topics, the status of the ESG risk library and the progress of related work through non-convened Board meetings. The purpose of this initiative is to keep the Directors abreast of the latest developments and potential risks in the ESG field, so as to provide comprehensive support for their decision-making.

ESG目標管理

在ESG目標管理方面,董事會授權ESG工 作小組全面負責本集團ESG目標及行動計 劃的推進與執行。工作小組的主要職責包 括收集相關數據、妥善管理目標及計劃落 實的記錄,並對ESG目標進行年度定期檢 討。檢討完成後,我們根據年度目標的達 成進度與成果,提出補救措施及指標更新 建議,並呈交董事會審批,以確保ESG目 標的持續優化與有效落實。

ESG TARGET MANAGEMENT

In terms of target management, the Board has authorized the ESG Working Group to oversee the advancement and execution of the Group's ESG objectives and action plans, collect relevant data, and appropriately manage records related to the implementation of objectives and plans. Additionally, the ESG Working Group conducts annual periodic reviews of ESG objectives. Following these reviews, we integrate progress and outcomes of annual objectives, and present proposals for remedial measures and updates to indicators to the Board for approval, ensuring the continuous optimization and effective implementation of ESG objectives.

為確保各項ESG目標及行動計劃的執行成 效,我們建立了系統化的管理流程,具體 包括以下關鍵步驟: We ensure effective control, implementation, and execution of various ESG goals and action plans through the following processes:



ESG目標行動計劃 ESG Goals and Action Plan

透過完善的定期記錄與年度檢討機制,董 事會能夠更精準地掌握本集團各項ESG目 標的達成進度,並深入分析執行過程中的 成效與挑戰。這一機制不僅為董事會提供 了全面的數據支持,更有助於識別未來業 務發展中ESG領域所需的資源與投入,從 而為制定更加細緻且全面的長期ESG發展 策略做出積極準備。

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Through a well-established regular record-keeping and annual review mechanism, the Board is able to more accurately grasp the progress of the achievement of the Group's ESG objectives and analyze in-depth the effectiveness and challenges in the process of implementation. This mechanism not only provides the Board with comprehensive data support, but also helps to identify the resources and inputs required in the ESG area for future business development, so as to actively prepare for the formulation of a more detailed and comprehensive long-term ESG development strategy.

ESG風險管理

本集團高度重視ESG風險管理,並積極識 別與評估其影響範圍內對業務運營具有重 大影響的ESG風險。針對這些風險,我們 制定了具體的管理措施,以有效減緩其對 業務的潛在影響。為確保ESG風險管理的 系統性與全面性,我們建立了標準化的流 程,協助董事會識別、評估、優先排序及 管理環境、社會及科技三個層面的重要風 險。具體過程如下:

ESG RISK MANAGEMENT

The Group places high priority on ESG risk management, proactively identifying and assessing ESG risks within its operational sphere that may materially impact business operations. For these risks, we have developed targeted mitigation measures to address their potential consequences. To ensure systematic and comprehensive ESG risk governance, we have established standardized processes that assist the Board of Directors in identifying, evaluating, prioritizing, and managing critical risks in the environmental, social, and technological dimensions, with the detailed process as follows:

步驟一:風險識別及建立 ESG風險庫 Step 1: Risk Identification and Establishment of ESG Risk Library

分析與本集團業務相關的 發展及風險大趨勢、同行 企業關注的ESG風險及中 國同輻2023年度ESG風險 庫,篩選出18項與本集團 相關的ESG風險,建立了 本報告期ESG風險庫。 By analyzing macro trends impacting the Group's operations, ESG risks prioritized by industry peers, and CIRC's 2023 ESG risk library, we identified 18 material ESG risks relevant to the Group. These risks were consolidated into a structured ESG Risk library for the Reporting Period.

步驟二:風險的優次排列 Step 2: Prioritization of Risks

本集團從「ESG風險影響的 嚴重性」和「ESG風險發生 的可能性」兩個維度,邀請 相關部門負責人通過問卷 評估形式進行評分。我們 根據評分結果得出ESG的 風險程度及風險矩陣,在 環境、社會及科技三個層 面共識別出3項重要ESG 風險。

The Group scores from two dimensions: "Severity of ESG Risk Impact" and "Likelihood of ESG Risk Occurrence." Department heads were engaged through a structured questionnaire to score each risk. Based on the scoring results, the ESG risk level and risk matrix are derived, and 3 significant ESG risks are identified in the environmental, social, and governance dimensions.



步驟三:邀請董事會確認 重大ESG風險 Step 3: Inviting the Board to Confirm Major ESG Risks

工作組向董事會匯報ESG 風險結果並邀請董事會進 行最終確認。本集團針對 結果制定並實施相應的風 險管控措施以及將ESG風 險納入企業風險管理流程。 The Working Group reports the ESG risk results to the Board and invites the Board for final confirmation. The Group formulates and implements corresponding risk control measures for the results and integrates ESG risks into the corporate risk management process.

根據ESG風險評估結果,本集團於本報告 期內識別出以下對其運營及業務至關重要 的ESG風險(風險程度為「非常高」),並 對相關管控措施進行審視,確保該等風險 得到有效控制: Based on the ESG risk assessment results, the Group identified the following ESG risks (with risk level being "high") crucial to its operations and business during the Reporting Period and reviewed the relevant control measures to ensure that these risks are effectively controlled:

重大ESG風險	
Material ESG	中國同輻的管理措施
Risks	CIRC's management measures
供應鏈管理風險	▶ 圍繞重點國別梳理國際市場開放過程中的潛在風險,指導成員單位市場開發風險到
Supply Chain	別工作。
Management Risk	Systematically identify potential risks in international market expansion across key
	regions, guiding subsidiary units in risk screening during market development.
	不定期對供應鏈中可能產生環境及社會風險的事項進行評估,繼而提出有效控制措施。以合規風險為例,本集團全面開展合規風險排查與風險控制工作,要求推廣服務商(CSO公司)出具反商業賄賂及無關聯關係承諾函,保證在與本集團合作過程中進行正當商業往來,保證推廣服務活動的廉潔性。
	Conduct periodic assessments of environmental and social risks across the supply chain, followed by actionable control measures. For compliance risks, the Group
	implements comprehensive compliance risk screening and control protocols Promotion service providers (CSO companies) are required to submit Anti-Briber and Non-Collusion Commitment Letters, ensuring ethical commercial practices and
	integrity in collaborative engagements.
	於採購物資及貨物品類產品時會優先選擇當地政府環保政策的供貨商,以確保其符合本集團的綠色採購理念。
	Prioritize suppliers compliant with local government environmental policies when procuring materials and goods, aligning with the Group's green procuremen principles.
	在評估供貨商的過程中,透過現場評審、數據評審及備案評審對供貨商實行准入管理。
	Implement a three-tier supplier access management system through on-site audits documentation reviews, and compliance verification.

重大ESG風險 Material ESG Risks	中國同輻的管理措施 CIRC's management measures
反貪污風險 Anti-Corruption Risk	對照《中華人民共和國刑法》《中國共產黨紀律處分條例》《中國共產黨紀律檢查機關 監督執紀工作規則》及《國有企業管理人員處分條例》等法律法規和上級部門相關制 度,結合實際形成本公司制度並嚴格落實,抓好賄賂、勒索、欺詐及洗黑錢的日常 防範。
	 Strictly adhere to national laws and regulations, including the Criminal Law of the People's Republic of China, Disciplinary Regulations of the Communist Party of China, Work Rules for Supervision and Enforcement of Discipline by Communist Party of China Discipline Inspection Authorities, and Regulations on Sanctions for State-Owned Enterprise Managers. Develop and enforce internal anti-corruption policies targeting bribery, extortion, fraud, and money laundering. 修訂中國同輻《信訪舉報與問題線索管理細則》等制度,暢通信訪舉報渠道,設置公開舉報電話,按流程受理、處置檢舉控告、問題線索,嚴肅開展監督執紀問責。Revise CIRC's Detailed Rules for the Management of Letters, Visits, and Whistle-Blowing to streamline reporting channels, including a dedicated hotline. Establish formal procedures for handling allegations and conducting disciplinary investigations. 嚴格執行中國同輻《反舞弊管理辦法》。此辦法適用於中國同輻本部及各成員單位,明確高級經營管理層的反舞弊工作,將對舞弊符為的持續監督融入到日常工作中; 同時規定由反舞弊工作常設機構對舞弊舉報進行接收、調查、報告和提出處理意見。此外,《合規行為準則》嚴格要求全體員工切實遵守相關準則,例如其中的《致力合規管理》專章提到與醫療專業人士、醫療機構進行藥品推廣、醫學互動交流等事項時,切實做到反腐敗的要求。
	Enforce CIRC's Anti-Fraud Management Measures, applicable to headquarters and all subsidiaries. Clarify anti-fraud responsibilities for senior management, embed continuous fraud monitoring into daily operations, and mandate the permanent Anti- Fraud Office to receive, investigate, and resolve reports. The <i>Code of Conduct</i> further mandates strict adherence to anti-corruption requirements, particularly during engagements with healthcare professionals and institutions for product promotion or medical exchanges.

重大 ESG 風險	
Material ESG	中國同輻的管理措施
Risks	CIRC's management measures
合規風險 Compliance Risk	 積極應對法律制裁、監管處罰、財務損失、聲譽損失的風險,採取有效措施進行合規風險管控。 Proactively address risks of legal sanctions, regulatory penalties, financial losses, and reputational damage through robust compliance controls. 印發法治工作要點:緊緊圍繞公司發展戰略和重點任務,發揮法律、風險、合規、內控評價、制度建設等在內的「大法治」職能體系優勢,紮實推進法治同 輻建設;強化單位主要負責人推進法治建設第一責任人職責,持續提升風險管
	理、合規管理、制度建設實效。
	Issue <i>Key Priorities for Legal Work</i> to closely aligned with the Company's development strategy and core priorities, leveraging the integrated strengths of the "Comprehensive Legal Governance" framework – encompassing legal oversight, risk management, compliance, internal control evaluations, and institutional development – to advance the robust implementation of CIRC's legal governance system.
	 對同輻系統藥品及醫療器械銷售業務單位開展全面合規性調研及檢查,向被檢查單位下發公司治理和合規管理領域存在的問題整改單。
	Conduct comprehensive compliance inspections across subsidiaries engaged in pharmaceutical and medical device sales, issuing rectification orders for
	 governance and compliance deficiencies. 針對放射源產品的生產、使用、銷售等各環節,基於現場作業、體系管理等方面建立了相應內部管理制度,同時對於放射源的貯存、運輸、回收等環節建立 了實體防護,配備相應的環境監測人員對設備定期開展環境監測,定期開展人員教育培訓,制定輻射應急預案。
	Establish internal protocols for the production, use, and distribution of radioactive materials. Implement physical safeguards for storage, transportation, and disposal of radioactive sources. Deploy environmental monitoring personnel, conduct regular equipment checks, and maintain emergency response plans for irradiation incidents.
	➤ 以貫徹落實《中央企業合規管理辦法》為重點,發佈《中國同輻關於落實<中央企業合規管理辦法>工作方案》及工作台賬,建立覆蓋各業務領域、各職能線條、各級子企業的合規管理組織體系,以及以合規管理基本制度為核心、合規行為準則為基礎、重點領域合規指引為補充的「1+N」合規管理制度體系。
	Prioritize the implementation of the <i>Central Enterprise Compliance Management Guidelines</i> by issuing <i>CIRC's Implementation Plan for the Central SOE Compliance Management Measures</i> to build a compliance management organizational structure covering all business units, functions, and subsidiaries. Develop a "1+N" compliance management system framework, comprising a core compliance policy, behavioral codes, and sector-specific guidelines.

ESG實質性議題管理及利益相關 方溝通

ESG實質性議題管理

為識別對本集團最為重要的ESG議題、及 時響應各利益相關方對本集團ESG表現方 面的關注點,本集團定期進行重要性評估 工作,並不斷完善重要性評估的工作機制 與方法。報告期內,本集團開展實質性議 題評估,以確定本報告的重點披露範圍。 實質性議題評估具體流程如下:

MATERIAL ESG TOPIC MANAGEMENT AND STAKEHOLDER COMMUNICATION

MATERIAL ESG TOPIC MANAGEMENT

To identify the most important ESG issues for the Group and timely respond to the concerns of various stakeholders on the Group's ESG performance, the Group regularly conducts materiality assessments and continuously improves the work mechanism and methods of materiality assessment. During the Reporting Period, the Group conducted a materiality assessment to determine the key disclosure scope of this Report. The specific process of materiality assessment is as follows:

與利益相關方積極溝通以 了解其期望,同時參考往 年所識別的議題庫、聯交 所要求、同行企業特色相 關議題、國際評級機構的 行業議題重要性議題,以 及其他有關本集團業務性 質和發展方向的議題 The Group actively communicates with stakeholders to understand their expectations, and review topics identified in previous vears. requirements from the SEHK, unique issues of peer companies, important topics from international rating agencies, and other topics related to the nature and development direction of the Group' s business

> 識別 Identification

排序 Ranking

邀請內部(包括集團董事、監 事、高級管理層)及外部(涵 蓋員工、股東、政府及管理機 構、客戶、供應商、社區及行 業協會)利益相關方,按照其 對 ESG 議題庫中各議題的關 注程度進行排序。(此次實質 性議題評估一共收到843份 有效問卷回復) We invite internal (including Group's directors, supervisors, senior management) and external stakeholders (including employees, shareholders, government and regulatory agencies, customers, suppliers, and communities and industrial institutions) to rank the topics in the ESG topic library according to their level of concern (This materiality assessment received a total of 843 valid questionnaire responses)

性」及「對利益相關方重 要性」兩個維度審視各議 題的重要性。在兩個維度 上均分為5分及以上的議 題將視為實質性議題,共 得到環境層面中 6 項及社 會層面中 9 項實質性議題 The importance of each topic is reviewed based on two dimensions: "the degree of impact on CIRC" and "the degree of impact on stakeholders." Topics with a score of 5 or above in both dimensions are considered material topics, resulting in 6 environmental topics and 9 social topics being identified as material issues

根據「對中國同輻的重要

檢視 Review

本集團檢視識別出的實 質性議題並確認其對本 集團利益相關方的重要 性,從而有針對性地於 本報告中進行披露 The Group reviews and confirms the importance of the identified material issues to the Group's stakeholders, and discloses them specifically in this Report

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Environmental, Social and Governance Report 2024 環境、社會及管治報告2024

評估

Assessment

我們分別以環境層面、社會層面及管治層 面展示有關實質性議題評估的結果,請參 見下圖。 The results of our materiality assessment are presented in environmental, social and governance aspects respectively. Please refer to the charts below.







根據實質性議題評估結果,本集團將ESG 議題進行分類,分別是第一層次議題、第 二層次議題及第三層次議題。第一層次議 題為實質性議題。我們會於本報告中詳細 回應與其有關的策略及表現。我們亦會在 本報告中回應與第二層次議題有關的部分 實踐。 Based on the results of the materiality assessment, the Group categorizes ESG topics into three tiers: Tier 1, Tier 2, and Tier 3. Tier 1 topics are material topics. We will respond in detail to our strategies and performance related to these topics in the Report. We will also respond to some practices related to Tier 2 topics in this Report.

			管治層面
議題	環境層面	社會層面	Governance
Topics	Environmental Aspect	Social Aspect	Aspect
第一層次議題	• 廢氣排放與管理	 產品質量及安全管控體系 	
(實質性議題)2	Exhaust gas emission	s Product quality and safety	4
Tier 1 Topics	and management	management system	
(Material Topics) ²	• 廢水排放與管理	• 自主技術創新	
	Wastewater discharge	e Technological innovation	
	and management	• 僱員健康與安全	
	• 固體廢物產生與管理	Employee health and safe	ety
	Solid waste generatio	n ● 醫療健康可及性	
	and management	Healthcare accessibility	
	• 溫室氣體排放與管理	• 知識產權保護	
	Greenhouse gas	Intellectual property right	
	emissions and	protection	
	management	• 化學品安全	
	• 保護環境及天然資源	Chemical safety	
	Protecting the	• 信息安全與隱私保護	
	environment and	Information security and	
	natural resources	privacy protection	
	• 能源使用及效益	• 客戶滿意度	
	Energy usage and	Customer satisfaction	
	efficiency	• 僱傭管理	
		Employment managemen	t

為分佈於實質性議題矩陣圖中藍色區域 ² T 的議題。

Topics distributed in the blue area in the materiality matrix.

			管治層面
議題	環境層面	社會層面	Governance
Topics	Environmental Aspect	Social Aspect	Aspect
第二層次議題 ³	• 水資源使用及效益	• 臨床試驗許可程序	/
Tier 2 Topics ³	Water usage and	Clinical trial approval	
	efficiency	procedures	
		• 推動行業發展	
		Promoting industry	
		development	
		• 供應鏈管理	
		Supply chain management ● 緊急事件管理	
		 系芯サロ目生 Emergencies management 	
		 • 僱員培訓與發展 	
		• 雇员扣前换级版 Employee training and	
		development	
		 ● 負責任營銷 	
		Responsible marketing	
第三層次議題4	• 應對氣候變化	 多元、平等與包容 	• 合規經營
Tier 3 Topics⁴	Tackling climate	Diversity, equality and	Compliant
	change	inclusion	operation
	• 生物多樣性	• 防止童工與強制勞工	 廉潔建設
	Biodiversity	Prevention of child labor	Integrity
		and forced labor	construction
		• 社區投資	• 企業管治
		Community investment	Corporate
			governance

- ³ 為分佈於實質性議題矩陣圖中綠色區域 的議題。
- Topics distributed in the green area in the materiality matrix.
- 4 為分佈於實質性議題矩陣圖中橙色區域的議題。

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Topics distributed in the orange area in the materiality matrix.

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利益相關方溝通

中國同輻深刻認識到與利益相關方的有效 溝通對於推動集團可持續發展的關鍵作 用。我們始終將利益相關方的意見與關注 事項置於重要位置,並通過多元化的溝通 平台與機制,確保與各方保持緊密聯繫, 深入了解他們的建議與期望。在制定和實 施可持續發展策略的過程中,我們充分採 納利益相關方的反饋,持續優化集團的可 持續發展表現。

在報告期內,我們通過線上調查問卷的形 式,對重要利益相關方進行了實質性議題 評估。通過對集團管理層及其他利益相關 方的問卷結果進行深入分析,我們識別出 對集團經濟、社會及環境具有重大影響的 核心議題。在此基礎上,我們全面梳理了 利益相關方的訴求與期望,並將其整合至 集團的可持續發展管理方針中,確保集團 的發展策略與利益相關方的期待保持一 致,進一步提升集團的可持續發展能力與 社會責任履行水平。

STAKEHOLDER COMMUNICATION

We deeply understand the importance of communicating with stakeholders for achieving the Group's sustainable development. We highly value the opinions and concerns of all stakeholders, communicate with them through diversified channels, and establish a comprehensive communication mechanism to ensure we understand their suggestions and expectations. We fully consider the opinions of stakeholders when formulating and implementing sustainable development strategies, continuously improving our sustainable development performance.

During the Reporting Period, the Group conducted a materiality assessment of significant issues for important stakeholders through online surveys. By analysing the survey results of the Group's management and other stakeholders, we summarised the key issues that the Group's management and other stakeholders believe have a significant impact on the Group's economic, social, and environmental aspects. On this basis, we have comprehensively analyzed the demands and expectations of our stakeholders and integrated them into the Group's sustainability management policy to ensure that the Group's development strategies are in line with the expectations of our stakeholders, and to further enhance the Group's sustainability capability and fulfillment of its social responsibilities.

利益相關方組別	溝通渠道	可持續發展議題關注點
Stakeholder Group	Communication Channels	Sustainable Issue Concerns
	企業報告及公告	經濟績效
Shareholders	Corporate reports and announcements	Economic performance
	股東大會	企業管理
	Shareholder meetings	Corporate management
	官方網站	合規經營
	Official website	Compliant operation
	業績説明會、路演	
	Earnings presentation, roadshow	
	投資者日常溝通	
	Daily investor communications	
政府和管理機構	企業報告及公告	遵守相關法律法規
Government	Corporate reports and announcements	Compliance with relevant laws and
and Regulatory	政企交流	regulations
Authorities	Government-Enterprise Exchanges	依法納税
		Tax according to the law
員工	職工大會	員工權益與發展
Employees	Staff council	Employee rights and development
	員工座談會	健康與安全
	Employee discussion forum	Health and safety
	工會活動	
	Labor association activities	
	電郵	
	Email	
客戶	客戶拜訪	產品質量
Customers	Customer visits	Product quality
	服務滿意度調查	優質服務
	Customer service satisfaction surveys	High-quality service
供應商	公開招標	公平公開的招標過程
Suppliers	Public tender	Fair and open tendering process
	面談及電郵	雙贏合作
	Interviews and email	Win-win cooperation
社區	公益活動	業務合規
Community	Charitable activities	Business compliance
		社區參與
		Community engagement
		環境保護
		Environmental protection

2024年度可持續發展亮點 SUSTAINABLE DEVELOPMENT HIGHLIGHTS FOR 2024

保護環境

Environment Protection

0重大環境影響事件 0 significant environmental impact events 累計獲得環境管理認證15項 Accumulated 15 environmental management certifications 共回收再利用2,344枚廢舊放射源⁵ A total of 2,344 spent radioactive sources were recovered for reuse⁵

社會奉獻 Social Contribution

	新獲專利授權224項
Research and Development	New patents granted for 224 projects
	研發投入達6.6億元
	R&D investment reached 660 million yuan
責任供應鏈	合格供應商評價及不良行為管理達到 100%
Responsible Supply Chain	Evaluation of qualified suppliers and malpractice
	management reached 100%
員工安全	0因工傷亡人數
Employee Safety	0 Number of work-related injuries and deaths
安全培訓	超 2,700 名員工參與「新春安全第一課」安全培訓
Safety Training	More than 2,700 employees participated in the "First
	Safety Lesson after the Chinese New Year" Safety
	Training
員工發展	受訓員工達 3,367 人
Staff Development	3,367 employees trained
優質服務	客戶滿意度調研覆蓋近 5,000 家
Premium Service	Customer satisfaction survey covering nearly 5,000
	companies
社會公益	完成無償捐贈約160萬元
Social Welfare	Completed about 1.6 million yuan of free donations
鄉村振興	採購定點幫扶地區農特產品價值超 38 萬元
Rural Rejuvenation	Procurement of agricultural and specialty products
	worth over 380,000 yuan from targeted support areas
税收貢獻	完成税費 ⁶ 繳納約 7.92 億元
Tax Contribution	Completed tax payments amounted to approximately
	792 million yuan

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5 本年度參與回收再利用的廢舊放射源 (「廢源」)種類為12萬居里的鈷-60廢源。

⁶ 2024年度税費繳納統計項目包含增值 税、消費税、資源税、城建税、煙葉 税、關税、企業所得税、教育費附加、 石油特別收益金及其他税費類別。 During the Reporting Period, the Company recycled and reused cobalt-60 disused radioactive sources (spent sources) with a total activity of 120,000 curies (Ci).

The statistical items for 2024 tax payments include Value-Added Tax, Consumption Tax, Resource Tax, Urban Maintenance and Construction Tax, Tobacco Leaf Tax, Customs Duty, Enterprise Income Tax, Education Surcharge, Special Petroleum Levy, and other tax categories.

2024年度可持續發展亮點 (續) SUSTAINABLE DEVELOPMENT HIGHLIGHTS FOR 2024 (CONTINUED)

責任管治 Responsible Governance

董事會管理 Board management

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集團治理 Group governance 投資者關係管理 Investor Relations Management 召開8次董事會 8 board meetings held 開展7次專題調研活動 7 thematic research activities was conducted 三項法律審核率均達100% 100% of all three legal clearances 完成100項公告披露 100 bulletin disclosures completed 開展投資者調研11次 Conducted 11 investor surveys

2024年度專題 2024 KEY THEMES

在全球可持續發展理念的普及、ESG理念 在全球政府和市場主體中得到廣泛實踐和 推廣的時代背景下,中國同輻在推進綠色 低碳、履行社會責任、強化公司治理等方 面積極擔當、勇於創新,不斷推動ESG理 念深入公司發展的重要環節。作為中國核 技術應用產業的驅動者,中國同輻將建設 「核工業強國」、「健康中國」作為雙重使 命,積極投身核技術應用產業主戰場,成 為中核集團進軍人民生命健康領域的主力 和科技成果轉化的主通道。

中國同輻聚焦核醫療健康和輻照應用,形 成以核素、核藥、核醫療裝備核醫學整體 解決方案、放射源及應用、輻照應用等6 大業務為核心,以主業進出口貿易、其他 戰略性新興產業為重點的「6+N」產業佈局 體系。中國同輻立足新發展階段,加速培 育新質生產力,推動「數字核技術」與產 業深度融合,以深化核技術惠民應用為目 標樹立示範標桿,踐行央企「科技賦能、 緣能報國」的時代擔當,為「健康中國」與 「雙碳」戰略貢獻核心力量。 In the context of the global promotion of sustainable development concepts and the widespread implementation of ESG principles across governments and market entities, CIRC has taken an active role in advancing green low-carbon initiatives, fulfilling social responsibility, and strengthening corporate governance. The Company has continuously pushed for the deep integration of the ESG concept into key aspects of its development. As a driver in China's nuclear technology application industry, CIRC takes on the dual mission of building a "Strong Nuclear Industry Nation" and a "Healthy China," actively engaging in the core battlefield of the nuclear technology application industry. CIRC has become the main force for the China National Nuclear Corporation's (CNNC) entry into the health and wellness sector, while being the main channel for the transformation of advanced nuclear technology achievements.

CIRC focuses on nuclear medical health and irradiation applications, establishing a "6+N" industrial layout system. This framework centers on six core businesses: radionuclides, radiopharmaceuticals, comprehensive nuclear medicine solutions featuring medical equipment, radiation sources with applications, and irradiation technologies. It simultaneously prioritizes importexport trade of core products and strategic emerging industries. Positioned in the new development phase, CIRC accelerates the cultivation of new quality productive forces and drives deep integration between digital nuclear technology and industrial operations. Committed to expanding civilian applications of nuclear technology, CIRC sets benchmark demonstrations while fulfilling its mission as a central state-owned enterprise to "empower through technology and serve the nation with green energy". CIRC contributes vital momentum to both the "Healthy China" initiative and China's dual-carbon.

專題1:聚焦核技術應用

國家政策引導

黨的二十大提出加快構建新發展格局,推 動戰略性新興產業融合集群發展,全面推 進健康中國、製造強國建設等一系列戰略 舉措。黨的二十屆三中全會要求「健全因 地制宜發展新質生產力體制機制」。

2024年3月,國務院發佈《推動大規模設 備更新和消費品以舊換新行動方案》, 鼓 勵醫療機構加快醫學影像、放射治療等醫 療裝備更新改造;2024年9月,工信部印 發《首台(套)重大技術裝備推廣應用指導 目錄(2024年版)》,將醫學影像裝備、放 射治療裝備納入其中;2024年10月,國 家原子能機構等十二部門印發《核技術應 用產業高質量發展三年行動方案(2024 -2026年)》,提出7大行動、20項具體任 務,全力培育產業發展新動能、新優勢; 2024年12月,國務院發佈《關於全面深 化藥品醫療器械監管改革促進醫藥產業高 質量發展的意見》,將放射性藥品、放射 性治療設備等納入優先審評審批範疇。作 為戰略性新興產業和新質生產力的典型代 表,未來國家層面必將投入更多資源用於 發展核技術應用產業。

THEME 1: FOCUSING ON NUCLEAR TECHNOLOGY APPLICATIONS

NATIONAL POLICY GUIDANCE

The 20th National Congress of the Communist Party of China outlined strategic initiatives to accelerate the formation of a new development paradigm, promote integrated cluster development of strategic emerging industries, and advance the "Healthy China" initiative and the goal of building a manufacturing powerhouse. The Third Plenary Session of the 20th CPC Central Committee further emphasized the need to "improve institutional mechanisms for developing new quality productive forces tailored to local conditions."

In March 2024, the State Council issued the *Action Plan for Promoting Large-Scale Equipment Upgrades and Consumer Goods Replacement*, encouraging medical institutions to accelerate the modernization of medical imaging and radiotherapy equipment. By September 2024, the Ministry of Industry and Information Technology (MIIT) released the Guidance Catalog for Promoting the Application of First (Set) Major Technical Equipment (2024 Edition), which included medical imaging and radiotherapy equipment. In October 2024, the National Atomic Energy Agency and 11 other departments jointly issued the Three-Year Action Plan for High-Quality Development of the Nuclear Technology Application Industry (2024-2026), proposing seven major initiatives and 20 specific tasks to cultivate new growth drivers and competitive advantages for the industry. In December 2024, the State Council published the Opinions on Deepening Drug and Medical Device Regulatory Reforms to Promote High-Quality Development of the Pharmaceutical Industry, prioritizing the review and approval of radioactive pharmaceuticals and radiotherapy equipment. As a flagship representative of strategic emerging industries and new quality productive forces, China's nuclear technology application sector is poised to receive increased national investment.

打造產業生態

中國同輻系統整合核素研發、生產及應用 資源,穩步推進核素生產基地建設,採用 「清潔能源+智能製造」融合模式,配套建 設光伏發電系統實現綠色供能。中核秦同 生產基地通過安全評審並取得生產經營資 質,全面進入試生產運行,為核醫學診療 服務網絡建設提供綠色核心保障。此外, 集團大力發展戰略性新興產業,打造「核 技術+」生態,推動核技術深度賦能生物 技術、新材料、高端製造、綠色環保等現 代化產業體系。

政企高效協同

建立常態化政企溝通機制,強化與生態環 境部、國家原子能機構等部門聯動,推動 輻射安全監管政策與產業發展深度耦合。 聯合重點省發改委、衛健委建立協同機 制,破解「談核色變」認知壁壘。針對產 業規模小、社會認知度低等挑戰,積極建 言完善法律法規體系與行業標準頂層設 計,以「新質生產力」培育為抓手,構建 核技術賦能健康中國與低碳轉型的創新範 式。此外,中國同輻亦通過「產學研用」 協同平台培育專業人才,為產業可持續發 展注入新動能。

BUILDING THE INDUSTRIAL ECOSYSTEM

CIRC has systematically integrated resources for radionuclide R&D, production, and application, steadily advancing the construction of radionuclide production bases. Adopting a "clean energy + smart manufacturing" hybrid model, CIRC has developed supporting infrastructure such as photovoltaic power systems to achieve green energy supply. The production base of CNNC Qinshan Isotope Co., Ltd has passed safety reviews and obtained production qualifications, entering the trial production phase, thus providing a green core guarantee for the construction of the nuclear medical diagnostic and treatment service network. The Group is also actively developing strategic emerging industries, creating a "nuclear technology +" ecosystem, enabling the deep integration of nuclear technology with biotechnology, new materials, high-end manufacturing, and green environmental protection.

EFFICIENT GOVERNMENT-ENTERPRISE COLLABORATION

CIRC has established regular government-enterprise communication mechanisms, strengthening coordination with the Ministry of Ecology and Environment, the National Atomic Energy Agency, and other departments to integrate radiation safety supervision policies with industry development. It has collaborated with key provincial development and reform commissions and health commissions to break down barriers related to public perception of nuclear technology. Addressing the challenges of small industry scale and low social recognition, CIRC has actively contributed to improving the legal framework and industry standards, focusing on cultivating "new productivity", and establishing an innovative model that empowers the "Healthy China" and low-carbon transformation initiatives. Additionally, the Company has created a "production, learning, research, and application" collaborative platform to cultivate professional talent, injecting new momentum into the sustainable development of the industry.



承辦核技術應用產業鏈共鏈行動大會,核技術應用產業 聯盟正式發起設立

Undertook the Nuclear Technology Application Industry Chain Action Conference, and formally initiated the establishment of the Nuclear Technology Application Industry Alliance 2024年11月6日至7日,核技術應用產業鏈共鏈 行動大會在四川成都隆重召開,中國同輻作為本 屆大會的重要承辦單位及核技術產業重要參與 者,圍繞本次大會「共鏈賦能核創未來」主題, 深度參與到本次盛會。中國同輻聚焦核技術產業 鏈上下游單位進一步深化合作,提升產業整體競 爭力,與行業內相關企業一同在現場進行核技術 應用產業鏈項目代表集中籤約,彰顯了核技術應 用產業內的合作。

From 6 to 7 November 2024, the Nuclear Technology Application Industry Chain Action Conference was grandly held in Chengdu, Sichuan Province. CIRC, as an important contractor of this conference and an important participant in the nuclear technology industry, spoke around the theme of the conference 'Common Chain Empowerment and Nuclear Creation for the Future', deeply participated in this grand event. Focusing on the upstream and downstream units of nuclear technology industry chain to further deepen the cooperation and enhance the overall competitiveness of the industry, CIRC focuses on the signing of nuclear technology application industry chain project representatives with relevant enterprises in the industry, which highlights the cooperation within the nuclear technology application industry.



中國同輻於大會上向同行優秀企業、協會專家、潛在客戶 等展示同輻核技術 CIRC demonstrated its nuclear technology to outstanding enterprises, experts and potential customers at the conference

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此外,在為期兩天的產業創新成果展覽展示活動 中,集團更是通過多層次的產業鏈交互活動,向 各方展示前沿核技術創新及應用案例,主動搭建 開放共享、互利互贏的合作交流環境。

In addition, during the two-day exhibition and demonstration of industrial innovation achievements, the Group even displayed cuttingedge nuclear technology innovations and application cases to all parties through multilevel industry chain interaction activities, and took the initiative to build an open and sharing, mutually beneficial and win-win co-operation and exchange environment.

擴展全球佈局

中國同輻構建覆蓋放射源全生命週期的 安全管理體系,形成「倒裝操作-專業運 輸 - 無害化回收」 - 體化服務能力, 推行 精益化與數智化生產管理模式,實現降 本增效與安全管控雙提升。本集團以「整 體●協同 | 理念深耕 [一帶一路 | 市場, 國 際化佈局成效顯著:在非洲市場,完成尼 日利亞首個核醫療設備整體供應項目;在 亞洲市場,中標孟加拉國核農業研究院百 萬居里級伽馬輻照站建設項目,實現海外 政府EPC工程零突破;在拉美市場,推 動中巴兩國簽署核技術和平利用合作備忘 錄,為核技術標準國際化奠定基礎。中國 同輻堅持技術輸出與國際標準共建雙輪驅 動,為核技術運用全球佈局貢獻[同輻] 力量。

EXPANDING GLOBAL PRESENCE

CIRC has built a security management system covering the entire life cycle of radiation sources, forming an integrated service capability from "reverse operations - professional transportation - harmless recovery." It has promoted lean and intelligent production management models, achieving both cost reduction and safety control improvements. The Group has deeply cultivated the "Belt and Road" market with the concept of "overall collaboration," achieving significant international expansion: In Africa, it completed Nigeria's first nuclear medical equipment supply project; in Asia, it won the bid for the construction of a million-curie gamma irradiation facility at the Bangladesh Nuclear Agricultural Research Institute, marking a zero breakthrough in overseas government EPC projects; in Latin America, it facilitated the signing of a memorandum of nuclear technology peaceful use cooperation between China and Pakistan, laying the foundation for the internationalization of nuclear technology standards. CIRC persists in driving technological output and co-building international standards, contributing to global nuclear technology application expansion.



與巴西IPEN研究院在IAEA部長級會議期間簽署和平利用 核技術諒解備忘錄 CIRC signed a Memorandum of Understanding (MoU) with Brazil's Institute for Energy and Nuclear Research

(IPEN) during the IAEA Ministerial Conference

中國同輻積極協助中國一非洲和平利用核技術 合作推介會、參加首屆金磚國家核醫學論壇、訪 問巴西並參加政府、核技術研究院所等相關合作 活動,有效推動集團核技術應用產業在國際市場 走深走實,進一步提升國際化經營水平。 CIRC actively supported international cooperation initiatives, including the China-Africa Forum on Peaceful Use of Nuclear Technology, participated in the inaugural BRICS Nuclear Medicine Forum, and engaged in government and institutional collaboration activities during its delegation to Brazil. These efforts have significantly advanced the Group's nuclear technology application industry in global markets, deepening its international footprint and elevating operational capabilities.

專題2:踐行「健康中國」戰略

強化戰略保障機制

中國同輻堅持以習近平總書記新時代中國 特色社會主義思想為指導,將黨的領導貫 穿戰略實施全過程。本集團加速推進核藥 研發與醫療裝備性能優化,同步拓展核醫 學整體解決方案在基層醫療機構的應用覆 蓋。中國同輻深化國企改革,全面落實市 場化經營機制,通過「科研分紅激勵+超 額利潤分享」模式激發創新活力,強化高 端醫療裝備核心部件國產替代攻關,組 建跨領域產學研協同團隊推進「放療+影 像」技術融合,落實「健康中國」建設核心 任務。

構建核醫學服務網絡

中國同輻已構建覆蓋全國的核醫學服務體 系,形成以37家醫藥中心為樞紐、7個研 發生產基地為支撐的戰略佈局,年服務患 者超6,000萬人次,累計為1.8萬家醫療機 構供應放射源設備4萬餘台。作為國內放 射性診療藥品資質最全的企業,持有200 餘項藥械註冊文號,核心產品市場佔有率 穩居行業首位。針對基層醫療資源薄弱現 狀,集團聯合中華醫學會核醫學分會實施 「基層核醫學示範工程」,2024年完成11 家縣域醫院標準化核醫學科室建設,通過 設備捐贈、人才培訓、遠程診療三維聯 動,推動三甲醫院優質資源向基層延伸, 助力實現「大病不出縣」的醫改目標。

THEME 2: IMPLEMENTING THE "HEALTHY CHINA" STRATEGY

STRENGTHENING STRATEGIC SECURITY MECHANISMS

Guided by the thought of General Secretary Xi Jinping's new era of socialism with Chinese characteristics, CIRC integrates the Party's leadership throughout the strategic implementation process. The Group accelerates the research and development of nuclear pharmaceuticals and optimizes the performance of medical equipment while expanding the application of nuclear medicine solutions in primary medical institutions. CIRC deepens state-owned enterprise reforms, fully implements marketoriented management mechanisms, and fosters innovation by introducing a "scientific research bonus incentive + excess profit sharing" model. The Company strengthens efforts to replace core components of high-end medical equipment with domestic alternatives, and forms cross-disciplinary collaborative teams to advance the integration of "radiation therapy + imaging" technologies, carrying out the core tasks of building "Healthy China."

BUILDING A NUCLEAR MEDICINE SERVICE NETWORK

CIRC has built a nationwide nuclear medicine service system, forming a strategic layout supported by 37 medical centers and seven R&D and production bases, providing services for over 60 million patients annually. The Company has supplied more than 40,000 radiation source devices to 18,000 medical institutions. As the company with the most comprehensive qualifications for radioactive diagnostic medicines in China, it holds over 200 drug and device registration numbers, and its core products maintain the highest market share. In response to the lack of medical resources in grassroots healthcare, CIRC has partnered with the Chinese Society of Nuclear Medicine to implement the "Grassroots Nuclear Medicine Demonstration Project," establishing standardized nuclear medicine departments in 11 county-level hospitals in 2024. Through the three-dimensional linkage of equipment donation, talent training and telemedicine, the Group has promoted the extension of quality resources from tertiary hospitals to the grassroots level, and helps to realize the goal of medical reform of "keeping major illnesses out of the county".

突破關鍵技術壁壘

中國同輻緊扣《醫用同位素中長期發展規 劃》戰略要求,在腫瘤與神經退行性疾病 領域實現系統性突破。藥物研發方面,10 餘款在研新藥覆蓋阿爾茨海默病等疾病診 療需求。醫療裝備自主化進程加速,伽瑪 射束立體定向放療系統、TOMO-C高端 放療設備等國產化產品相繼投產。同時, 本集團2024年度於同位素製備技術取得 里程碑進展,銅(⁶⁴Cu)規模化生產工藝攻 克產能瓶頸,碳(¹³C)穩定同位素實現試生 產,為核醫學可持續發展奠定基礎。

BREAKING THROUGH KEY TECHNICAL BARRIERS

CIRC has achieved systematic breakthroughs in the fields of oncology and neurodegenerative diseases, as outlined in the "Medium and Long-Term Development Plan for Medical Isotopes." In pharmaceutical development, over 10 new drugs are under research to address diseases such as Alzheimer's. The Company is accelerating the process of domestic production of medical equipment, with gamma stereotactic radiation therapy systems and TOMO-C high-end radiotherapy devices now in production. Additionally, in 2024, the Group made milestone progress in isotope production technology, overcoming capacity bottlenecks in large-scale production of Copper-64 (⁶⁴Cu) and successfully launching the pilot production of Carbon-13 (¹³C), laying the foundation for the sustainable development of nuclear medicine.



中核承影(西安)醫療設備有限公司發佈國產新型伽瑪射 束立體定向放射治療系統 CNNC Chengying (Xi'an) Medical Equipment Co., Ltd. launched China's independently developed gamma-ray stereotactic radiotherapy system 2024年8月8日,中核承影(西安)醫療設備有限 公司國產新型伽瑪射束立體定向放射治療系統在 西安正式發佈,標誌著中國同輻能夠提供完全自 主的「源械」協同模式方案,持續推動國產伽瑪 刀行業高質量發展,讓更多中國腫瘤患者能用上 好的放療設備。

On August 8, 2024, CNNC Chengying (Xi'an) Medical Equipment Co., Ltd., a subsidiary of CIRC, officially launched China's independently developed gamma-ray stereotactic radiotherapy system in Xi'an. This breakthrough marks CIRC's capability to provide fully localized "sourceequipment integrated" solutions, combining proprietary radiopharmaceuticals with advanced medical devices. The system's debut accelerates the high-quality advancement of China's gamma knife industry, ensuring broader access to cutting-edge radiotherapy technologies for cancer patients nationwide.

賦能健康管理生態

中國同輻以「診療一體化」為核心,推動 呼氣檢測、放射性藥物、放療裝備三大 業務深度融合,形成腫瘤早篩、精準診 斷、個體化治療的完整服務鏈。秉持「產 學研醫」深度融合的理念,中國同輻以臨 床需求為導向,鋭意創新,攻堅克難。在 2024年內,成功開發並上線了具有自主 知識產權的「輻智1.0」智慧核醫學系統, 本集團已率先在北京協和醫院建立了全球 首個國家級智慧核醫療示範中心,並完 成了「輻智1.0」系統在3家醫院的試點部 署。通過「設備+技術+服務」打包輸出模 式,為區域醫療中心提供定制化解決方 案,助力分級診療體系建設。

EMPOWERING THE HEALTHCARE ECOSYSTEMS

CIRC focuses on integrating diagnosis and treatment, promoting the deep fusion of its three main businesses: breath detection, radioactive pharmaceuticals, and radiotherapy equipment, forming a complete service chain for early tumor screening, precise diagnosis, and individualized treatment. Adhering to the "production, learning, research, and medicine" concept, CIRC prioritizes clinical needs and encourages innovation. In 2024, the Group successfully developed and launched the "Radiation Intelligence 1.0" nuclear medicine system and established the world's first national-level intelligent nuclear medicine demonstration center at Peking Union Medical College Hospital. The Group also completed pilot deployments of the "Radiation Intelligence 1.0" system in three hospitals. The Company's "equipment + technology + services" package provides customized solutions for regional medical centers and supports the construction of a tiered diagnosis and treatment system.


智慧核醫學1.0系統專家評審會在北京協和醫院順利召開 Expert Review Meeting on Smart Nuclear Medicine 1.0 System Successfully Held at Peking Union Medical College Hospital

2024年12月,智慧核醫學1.0系統專家評審會在 北京協和醫院順利召開,專家們一致認為,智 慧核醫學1.0系統的創新功能達到了行業領先水 平,可為患者帶來更加便捷的就診服務、為核藥 臨床應用安全提供有效監測和質控手段、幫助科 室提升符合國家環保和衛監標準要求的日常輻射 安全管理能力,助力科室降本增效,為精準醫療 質控和精準定量診療提供有力保障,對提升核醫 學科臨床規範化、智慧化水平,以及科室運營管 理標準化、可視化能力,推動我國核醫療高質量 發展具有較高的應用價值和推廣意義。

In December 2024, the expert review meeting of the Smart Nuclear Medicine 1.0 system was successfully held in Peking Union Medical College Hospital, and the experts unanimously agreed that the innovative functions of the Smart Nuclear Medicine 1.0 system have reached the leading level in the industry, which can bring more convenient consultation services for patients, provide effective monitoring and quality control means for the safety of the clinical application of nuclear medicine. It can help the department to improve the daily radiation management capability in compliance with the requirements of national environmental protection and health supervision standards, help the department to reduce costs and increase efficiency, and provide a strong guarantee for precise medical quality control and precise guantitative diagnosis and treatment, which is of high application value and promotion significance for improving the clinical standardisation and intelligence level of the Department of Nuclear Medicine, as well as the standardisation of the department's operation and management and the ability of visualisation, and promoting the high-quality development of China's nuclear medical treatment.

專題3:強化科技創新

擴寬輻照應用場景

中國同輻發揮核科技優勢,構建「輻照技術+循環經濟」融合發展模式。在材料改 性領域,通過輻照技術提升材料耐候性與 機械強度,延長使用壽命並降低原材料消 耗,實現緣色製造轉型。拓展輻照滅菌技 術應用場景,廣泛用於醫療器械、中藥、 食品等行業企業。同時,中國同輻研發醫 用防護服輻照滅菌工藝並提供免費滅菌服 務,用輻照滅菌替代傳統環氧乙烷滅菌 方法。

填補診療技術空白

中國同輻依托中核集團核反應堆技術優勢,成功研發多款國產化放射源產品,填 補國內空白。本集團持續聚焦核醫學診斷 治療關鍵領域,建立放射性藥物全週期 研發體系。中國同輻於2024年實現重大 醫藥科技突破:氟(¹⁸F)化鈉注射液獲批上 市,終結我國骨顯像PET診斷劑依賴進口 歷史;氟[¹⁸F]吡酰胺注射液進入臨床試驗 階段,為神經退行性疾病診斷提供新工 具。目前集團管線儲備豐富,擁有多款在 研放射性藥物,其中碘(¹³¹I)-MIBG注射液 等產品進入第三期臨床階段,鑥(¹⁷⁷Lu)氧 奧曲肽注射液等藥物完成臨床前研究,形 成「上市一代、臨床一代、儲備一代」的 梯次發展格局。

THEME 3: STRENGTHENING TECHNOLOGICAL INNOVATION

EXPANDING THE APPLICATION SCENARIOS OF RADIATION TECHNOLOGY

CIRC leverages the advantages of nuclear science and technology to create an integrated development model of "radiation technology + circular economy." In the field of material modification, it uses radiation technology to enhance the weather resistance and mechanical strength of materials, extending their lifespan and reducing raw material consumption, thereby achieving a transformation toward green manufacturing. The Company is also expanding the application of radiation sterilization technology, which is widely used in the medical device, traditional Chinese medicine, and food industries. In addition, CIRC has developed a radiation sterilization process for medical protective clothing and provides free sterilization services, replacing traditional ethylene oxide sterilization methods with radiation sterilization.

FILLING DIAGNOSTIC AND THERAPEUTIC GAPS

Relying on the nuclear reactor technology from the China National Nuclear Corporation, CIRC has successfully developed several domestically produced radiation source products, filling gaps in the domestic market. The Group continues to focus on critical areas of nuclear medicine diagnosis and treatment, establishing a full-cycle development system for radioactive pharmaceuticals. In 2024, CIRC achieved significant breakthroughs in pharmaceutical technology: the Sodium Fluoride Injection (18F) was approved for marketing, ending China's reliance on imported radiopharmaceuticals for bone imaging PET diagnosis; the 18F-Pyridinium Bromide Injection entered clinical trials, offering a new diagnostic tool for neurodegenerative diseases. CIRC's pipeline is rich, with several other radioactive pharmaceutical products under research, including lodine-131 MIBG Injection (¹³¹I), which is in the third phase of clinical trials, and Lutetium-177 Oxytocin Injection (177Lu), which has completed preclinical research, creating a "market-ready, clinical-stage, and researchstage" development model.

打造數字化研發平台

中國同輻同步打造「1+N」多層級研發平台 網絡,建設4個專業化研發中心,牽頭或 參與16個省部級以上科研平台,培育24 家高新技術企業集群。集團積極落實「數 字同輻」戰略藍圖,2024年度數字化轉型 工作取得顯著成效:

BUILDING A DIGITALIZED R&D PLATFORM

CIRC is also building a multi-level "1+N" R&D platform network, with four specialized research centers and participation in 16 provincial and ministerial-level research platforms. It is fostering a cluster of 24 high-tech enterprises. The Group is actively implementing the "Digital CIRC" strategy, achieving significant progress in its digital transformation in 2024:

「指方向」	編製數字化標準現狀與需求分析報告,並發佈網絡安全與信息化三年行動方 案,為數字化轉型把方向、推落實。	
"Providing Direction"	Prepared a report on the current status and demand analysis of	
	digitalization, released a three-year action plan for cybersecurity and information technology, and set the direction for its digital transformation.	
「助管理」	完成ERP系統全級次覆蓋,實現人力薪酬模塊100%上線,GSP系統推廣至 家核心單位。	
"Supporting Management"	Implemented the ERP system across all levels, with 100% coverage of the human resources and compensation modules, and extended the GSP system to five core units.	
「推轉型」	建成中核海得威智慧工廠試點,實現訂單到生產以及發貨全生產製造流程的 數據貫通;中核高通完成60%關鍵容器的智能監測終端推廣,助力提升安全 管控。	
"Promoting Transformation"	Established a smart factory pilot at Headway, achieving data integration across the entire manufacturing process, from order placement to production and shipment. Meanwhile, CNGT has promoted intelligent monitoring terminals for 60% of key containers, improving safety management.	
「重安全」	建立數據安全分級管理體系,完成14個系統遷移上雲,推進一張網建設,實現互聯網出入口統一。	
"Ensuring Safety"	Constructed a data security tiered management system, migrated 14 systems to cloud platforms, and implemented a unified network, ensuring the safety of its digital assets.	

專題4: 培育新質生產力

深化改革攻堅

中國同輻全面貫徹黨的二十屆三中全會精 神,系統推進市場化經營機制改革,完成 年度84項改革任務清單。在國資委「科改 行動」專項考核中躍升「標桿」企業序列, 排名提升23位,且改革實踐經驗入選國 資委權威案例集《千帆競渡》。本集團同步 深化對標世界一流企業管理提升行動,高 質量完成上市公司治理專項改革,《聚焦 核技術應用產業,構建綠色高質量發展新 格局》獲評2024年中國企業ESG可持續發 展典範案例。中國同輻亦於本年度發佈醫 藥中心、輻照站建設及運營管理標準化體 系文件,按期實施二級集採管控,全面提 升管理效能。

THEME 4: CULTIVATING NEW QUALITY PRODUCTIVE FORCES

DEEPENING INSTITUTIONAL REFORMS

CIRC fully implements the spirit of the third plenary session of the 20th Central Committee of the Communist Party, systematically advancing market-oriented management reforms, and completing 84 reform tasks within the year. CIRC has made significant progress in the "Science and Technology Reform Action" special evaluation by the State-owned Assets Supervision and Administration Commission, rising to the "benchmark" level and moving up 23 ranks. The Group's reform practices were selected as authoritative cases in the State-owned Assets Supervision and Administration Commission's "Thousand Sails Racing" collection. At the same time, CIRC deepens the management enhancement actions of world-class enterprises, achieving high-guality reforms in listed company governance. The report titled "Focusing on the Nuclear Technology Application Industry and Building a Green and High-Quality Development Pattern" was recognized as a model case of corporate ESG sustainable development in China for 2024. CIRC also published the standardization system for the construction and operation management of its pharmaceutical centers and irradiation stations, implementing secondary centralized procurement control to fully improve management effectiveness.

促進產業鏈發展

中國同輻積極承辦核技術應用產業鏈共鏈 行動大會、IAEA技術合作與核科學應用 部長級大會等行業會議,實現一批項目集 中籤約,產業鏈上下游合作進一步深化, 提升行業影響力。中國同輻實施「專精特 新」企業梯度培育計劃,全年新增創新型 企業12家、省級以上專精特新企業7家, 獲批國家級專精特新「小巨人」企業2家、 省級單項冠軍及企業技術中心各1家,累 計培育國家高新技術企業4家。中國同輻 形成「初創培育 -專項突破 - 行業領軍」 的遞進式發展格局。

DRIVING INDUSTRIAL CHAIN DEVELOPMENT

CIRC actively hosts key industry conferences such as the Nuclear Technology Application Industry Chain Collaborative Action Conference and the IAEA Ministerial Conference on Nuclear Science Applications. Through these platforms, CIRC has secured multiple project contracts, further deepening cooperation across the industry's value chain. CIRC has implemented the "Specialized, Refined, Differentiated, and Innovative" enterprise development plan, with 12 innovative enterprises, 7 provinciallevel "specialized and new" enterprises, 2 national-level "small giant" enterprises, and 1 provincial champion enterprise and corporate technology center being established throughout the year. To date, CIRC has cultivated 4 national high-tech enterprises. CIRC has created a progressive development model: "startups – specialized breakthroughs – industry leadership."

錨定國家新興產業賽道

中國同輻戰略性新興產業佈局卓有成效。 中國同輻堅持「戰略協同」,全力支持國際 原子能機構、國務院國資委開展產業重大 課題研究和專項規劃編製,全力協助國家 原子能機構編製發佈《核技術應用產業高 質量發展三年行動方案》,推動核應用前 沿領域技術儲備,助推行業高質量發展為 「十五五」核技術跨界融合奠定基礎。

ANCHORING NATIONAL EMERGING INDUSTRIES

CIRC's strategic focus on emerging industries has yielded remarkable results. CIRC insists on "strategic collaboration" and fully supports the International Atomic Energy Agency and the State-owned Assets Supervision and Administration Commission in conducting major industry research projects and preparing special plans. CIRC has also played a key role in assisting the National Atomic Energy Agency in preparing and releasing the *Three-Year Action Plan for High-Quality Development of the Nuclear Technology Application Industry (2024-2026)*. This plan helps promote the technical reserves in the cutting-edge fields of nuclear technology applications and lays the foundation for the high-quality development of the industry, facilitating the integration of nuclear technology with various sectors during the "15th Five-Year Plan" period.

綠色鑄基[,]環保賦能 BUILDING A GREEN FOUNDATION, EMPOWERING ENVIRONMENTAL SUSTAINABILITY

完善環境管理

環境管理體系

本集團將環境責任深度融入企業發展戰 略,通過系統性框架推動營運模式綠色轉 型,積極打造「綠色運營」文化。我們不 僅在日常營運中建立全生命週期環境管理 機制,更透過創新技術應用與流程優化, 構建涵蓋能源使用、廢棄物處理及資源循 環的低碳營運體系,致力於實現經濟效益 與生態效益的動態平衡。

本集團於本年度嚴格遵守環境保護法律法 規,確保所有營運活動全面符合以下環境 治理與資源保護相關規範:

《中華人民共和國環境保護法》 Environmental Protection Law of the People's Republic of China

《中華人民共和國放射性污染防治法》 Law of the People's Republic of China on Prevention and Control of Radioactive Pollution

《中華人民共和國環境影響評價法》 Environmental Impact Assessment Law of the People's Republic of China

《中華人民共和國土壤污染防治法》 Soil Pollution Prevention and Control Law of the People's Republic of China

《中華人民共和國水污染防治法》 Law of the People's Republic of China on the Prevention and Control of Water Pollution

《中華人民共和國水土保持法》 Water and Soil Conservation Law of the People's Republic of China

《中華人民共和國大氣污染防治法》 Air Pollution Prevention and Control Law of the People's Republic of China

《中華人民共和國固體廢物污染環境防治法》 《突發環境事件應急管理 Law of the People's Republic of China on Prevention Measures for the Emerg and Control of Environmental Pollution by Solid Waste Environmental Incidents

IMPROVING ENVIRONMENTAL MANAGEMENT

ENVIRONMENTAL MANAGEMENT SYSTEMS

The Group has deeply integrated environmental responsibility into its corporate development strategy, promoted the green transformation of its operation mode through a systematic framework, and actively built a 'green operation' culture. We have not only established a life-cycle environmental management mechanism in our daily operations, but also constructed a lowcarbon operation system covering energy use, waste treatment and resource recycling through the application of innovative technologies and process optimization, with a view to achieving a dynamic balance between economic and ecological benefits.

During the year, the Group strictly complied with the laws and regulations on environmental protection and ensured that all operating activities fully complied with the following norms relating to environmental governance and resource protection:

> 《危險化學品安全管理條例》 Regulations on the Safety Management of Hazardous Chemicals

> 《中華人民共和國節約能源法》 Energy Conservation Law of the People's Republic of China

> 《中華人民共和國環境噪聲污染防治法》 Law of the People's Republic of China on Prevention and Control of Environmental Noise Pollution

《中華人民共和國水法》 Water Law of the People's Republic of China

《排污許可管理條例》 Regulations on the Administration of Pollutant Discharge Permits

《放射性廢物安全管理條例》 Regulations on the Safety Management of Radioactive Waste

《環境監測管理辦法》 Measures for the Administration of Environmental Monitoring

《突發環境事件應急管理辦法》 Measures for the Emergency Management of Sudden Environmental Incidents

為進一步加強對排放物、資源使用的管理,有效管控對環境及天然資源造成重大 影響的風險,本集團對照相關法律標準, 制定並不斷修訂內部有關環境保護的管理 辦法、管理規定和工作方案等,包括但不 限於: In order to further strengthen the management of emissions and use of resources and to effectively control the risks of significant impact on the environment and natural resources, the Group has formulated and continuously revised its internal management methods, management regulations and work programmes relating to environmental protection in accordance with relevant laws and standards, including but not limited to:

《安全生產責任制及責任追究管理規定》 Production Safety Responsibility System and Accountability Management Regulations

《安全環保管理制度》 Safety Production Responsibility System and Accountability Management Regulations

《環境保護管理辦法》 Environmental Protection Management Measures

《安全環保風險管理辦法》 Safety and Environmental Risk Management Measures

《輻射安全管理辦法》 Radiation Safety Management Measures 《安全環保檢查管理辦法》

Safety and Environmental Protection Inspection Management Measure

《環境保護管理制度》(EHS-ZD-038-01) Environmental Protection Management System (EHS-ZD-038-01)

《廢物分類、收集及處理管理規程》(EHS-GC-038-01) Waste Classification, Collection, and Disposal Management Regulations (EHS-GC-038-01)

《放射性廢物收集處理管理規程》(EHS-GC-039-02) Radioactive Waste Collection and Disposal Management Regulations (EHS-GC-039-02)

本集團將資質認證視為推動環境管理體系 的重要元素,致力於通過國際標準化的管 理體系提升環境保護水平。2024年,旗 下子公司中核高能、中核安科鋭及原子 高科均已建立國際標準化的環境管理體 系。其中,中核高能及中核安科鋭均於報 告期內持續維持ISO 14001:2015環境管 理體系認證,展現其在生產全流程中對環 境影響控制的系統性能力;原子高科更 同步持有ISO 14001:2015認證與ISO/IEC 17025:2017實驗室認可證書,此雙重認 證不僅驗證其輻射防護實驗室符合《檢測 和校準實驗室能力的通用要求》國際規 範,更標誌著該機構具備精準監測環境指 標與管控潛在風險的技術實力。 The Group regards certification as an important element in the promotion of its environmental management system and is committed to enhancing environmental protection through an internationally standardized management system. 2024, its subsidiaries. CNNCHE and CNNC ACCURAY and HTA. have all established internationally standardized environmental management systems. Among them, CNNCHE and CNNC ACCURAY maintained ISO 14001:2015 environmental management system certification during the Reporting Period, demonstrating their systematic ability to control environmental impacts during the entire production process; HTA also holds ISO 14001:2015 certification and ISO/IEC 17025:2017 Laboratory Accreditation Certificate in tandem, which not only verifies that its radiation protection laboratory complies with the requirements of the 'Testing and Calibration Standards', but also provides the company with the latest information on the environmental management system and its environmental performance. This dual accreditation not only verifies that the radiation protection laboratory complies with the international standard 'General Requirements for the Competence of Testing and Calibration Laboratories' but also signifies that the organization has the technical strength to accurately monitor environmental indicators and control potential risks.



ISO14001:2015環境管理體系認證證書 ISO 14001:2015 Environmental Management System Certification

綠色鑄基[,]環保賦能^(續) BUILDING A GREEN FOUNDATION, EMPOWERING ENVIRONMENTAL SUSTAINABILITY (CONTINUED)

在報告期內,本集團未發生任何違反有關 廢氣及溫室氣體排放、向水及土地的排 污、有害及無害廢棄物相關環境法律或法 規,且對本集團構成重大影響的事件。

環境治理目標

為積極響應國家綠色發展轉型戰略,爭做 綠色可持續發展的先行者,本集團制定並 推行「降本增效」計劃,全面統籌提升運 行效率與降低能耗成本。我們深入挖掘生 產運行、技術改進、現場管理、能耗管理 及後勤管理等各環節的潛力,致力於實現 資源高效利用與成本優化。為進一步減少 水電、燃油等資源消耗,並降低生產經營 活動產生的溫室氣體排放,我們實施了一 系列多樣化管理措施,包括但不限於: During the Reporting Period, the Group did not experience any violations of environmental laws or regulations related to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste, nor any events that had a significant impact on the Group.

ENVIRONMENTAL GOVERNANCE GOALS

In order to actively respond to the national green development and transformation strategy and strive to be a pioneer in green and sustainable development, the Group has formulated and implemented the 'Cost Reduction and Efficiency Enhancement' programme, which aims to comprehensively integrate the enhancement of operational efficiency and the reduction of energy consumption and costs. We have tapped into the potential of production operation, technology improvement, site management, energy consumption management and logistics management to achieve efficient utilization of resources and cost optimization. To further reduce the consumption of resources such as water, electricity and fuel, as well as the greenhouse gas emissions from our production and operation activities, we have implemented a series of diversified management measures, including but not limited to:

目標	管理措施		
Goals	Management Measures		
	▶ 張貼「節約用電」的環保標語		
Energy usage	Posting of 'Save Electricity' environmental slogans		
	▶ 控制空調溫度:規定夏季室內空調溫度不得低於26℃,冬季室內空調溫度不得高於20℃		
	Control of air-conditioning temperatures: the requirement is that room air-		
	conditioning temperatures should not be lower than 26°C in summer and		
	higher than 20°C in winter		
	▶ 下班後關閉電腦熒幕和其他電器設備		
	Turn off computer screens and other electrical devices after work		
	▶ 使用低耗能照明裝置(例如LED燈)		
	Use of low energy consumption lighting fixtures (e.g. LED lights)		
	▶ 購買具有能源標籤的電器(例如一級能源標籤家電)		
	Purchase of appliances with energy labelling (e.g. Class 1 energy labelled		
	appliances) 内 技術復民 收如八 回 提 的 感 再 拖 为 敲 惊 感		
	▶ 中核海得威將部分區域的燈更換為聲控燈		
	Headway replaced lights in some areas with sound-activated lights		
	中核安科鋭廠務推行中央空調開啟計劃,並根據實時天氣情況嚴格控制中央 空調開關時間		
	CNNC ACCURAY implemented a key air-conditioning switch-on programme		
	and strictly controlled the switch-on time of the central air-conditioning		
	according to real-time weather conditions		

目標	管理措施
Goals	Management Measures
水資源使用	▶ 張貼「節約用水」的環保標語
Water usage	Posting of 'Save Water' environmental slogans
	通過培訓推廣節水意識,引導員工合理利用水資源
	Promoting water conservation awareness through training and guiding staff to
	use water resources wisely
	採用節水系統和器具(例如節水水龍頭)
	Adoption of water-saving systems and appliances (e.g. water-saving taps)
	石家莊原子高科醫藥有限公司定期檢查水管、水龍頭和馬桶,及時修復漏
	水,避免浪費
	Shijiazhuang Atomic High-Tech Pharmaceutical Co., Ltd regularly check water
	pipes, taps and toilets to fix leaks in time to avoid wastage
	▶ 中核海得威建立中水回用系統,提高可回收利用水資源的使用率
	Headway built a water reuse system to increase use of recyclable water
	resources
辦公用品	▶ 於關鍵地點張貼「節約用紙」的標識
Office supplies	Posting 'Save Paper' signs at key locations
	▶ 鼓勵雙面列印,減少紙張的使用
	Encouraging double-sided printing to reduce paper use
	▶ 推行無紙化(OA)辦公
	Implementation of a paperless (OA) office
包裝材料	實行包裝材料回收制度,對大部分包裝材料進行重複使用
Packaging material	Implementing a packaging material recycling system and reuse most of the
	packaging materials

高效資源利用

能源使用

中國同輻建立多層級能源管理架構,在本 部統一管理框架下,鼓勵各子公司依據營 運特性制定差異化能源使用方案,系統性 降低能源消耗,提升能源使用效率。我們 建立能源使用監測平台,對全集團用能情 況實施動態管理。每月定期統計電力、汽 油、煤氣、天然氣等能源消耗數據,並透 過信息化系統進行數據登記與分析。同 時,要求下屬單位依據國家統計局規範, 定期填報能源使用相關數據,確保數據完 整性與可比性。

EFFICIENT RESOURCE USE

ENERGY USE

CIRC has established a multi-level energy management framework. Under the unified management framework of the headquarters, each subsidiary is encouraged to develop differentiated energy use plans based on their operational characteristics. CIRC systematically reduces energy consumption and improves energy efficiency. A platform has been set up for monitoring energy use across the Group, with regular monthly statistics on the consumption of electricity, gasoline, gas, natural gas, and other energy sources, which are recorded and analyzed through an information system. In addition, subsidiaries are required to submit energy usage data in compliance with the National Bureau of Statistics' standards, ensuring data completeness and comparability.

中核安科鋭 – 跨部門節能管理小組 CNNC ACCURAY – Cross-departmental Energy Conservation Management Team

中核安科鋭成立跨部門節能管理小組,專責節能政策落實與方案優化。透過日常巡檢(如能源洩漏排查)、能 耗數據監控(建立計量表抄錄與能耗對比分析制度)及異常問題整改機制,強化能源使用管控。同時建立節能 考核機制,對各部門執行情況進行監督,並對違規行為實施相應處罰,確保節能措施有效落實。

CNNC ACCURAY has established a cross-departmental energy conservation management team, which is responsible for the implementation of energy-saving policies and the optimizations of energy-saving plans. Through routine inspections (such as energy leakage checks), energy consumption data monitoring (establishing a system for meter reading and energy consumption comparison analysis), and mechanisms for rectifying abnormal issues, the team strengthens the control of energy use. An energy-saving measures by each department and to impose corresponding penalties for violations, ensuring the effective implementation of energy-saving measures.

原子高科與中核高通 – 統一監測體系 HTA and CNGT – Unified Monitoring System

原子高科與中核高通生產線位於原子能院及動力源園區內,其排放指標納入院方統一監測體系,由院方負責 排放超標監督。此協作模式有效整合資源,提升監管效能。

The production lines of HTA and CNGT are located within the campus of the Institute of Atomic Energy and the Power Source Park. Their emission indicators are included in the unified monitoring system of the institute, which is responsible for supervising emissions exceeding the standards. This collaborative model effectively integrates resources and enhances regulatory efficiency.

北京原子高科服原工貿有限責任公司 – 公車用油管理制度 Beijing Atom High-tech Service & Trade Co., Ltd. - Public Vehicle Fuel Management System

北京原子高科服原工貿有限責任公司嚴格執行公車用油管理制度,確保用油量符合規範。同時,依「運輸證」 核准路線行駛,避免繞道增加能源消耗,實現運輸環節的節能管理。

Beijing Atom High-tech Service & Trade Co., Ltd. strictly enforces a public vehicle fuel management system to ensure that fuel consumption complies with regulations. Additionally, vehicles are required to travel along the approved routes as specified in the "Transportation Permit" to avoid detours that would increase energy consumption, thereby achieving energy-saving management in the transportation process.

水資源使用

WATER USAGE

本集團系統性推動水資源管理,致力提升 用水效率與減少水資源浪費。在節水措施 方面,本集團實施多項具體方案:張貼節 約用水標語以提升環保意識;定期舉辦節 水培訓,強化員工合理用水觀念;全面採 用節水設備,如節水型水龍頭等裝置。此 外,我們還鼓勵各子公司積極建立廢水回 收再利用系統,主要處理清洗製程廢水及 純化水製備過程產生的廢水,實現水資源 多重利用。本年度集團取水與用水作業均 順利進行,未發生供水困難情況。 The Group systematically promotes water resource management and endeavors to enhance water efficiency and reduce water wastage. In terms of water conservation measures, the Group has implemented a number of specific programmes: posting water conservation slogans to raise environmental awareness; organizing regular training sessions on water conservation to reinforce the concept of rational use of water among employees; and adopting water-saving equipment, such as water-saving taps and other devices. In addition, we encourage our subsidiaries to actively establish wastewater recycling and reuse systems, which mainly deal with wastewater generated from the cleaning process and the preparation of purified water, so as to achieve multiple uses of water resources. During the year, the Group's water intake and consumption operations were carried out smoothly without any difficulties in the water supply.

各子公司亦因地制宜推行特色節水措施:

The subsidiaries have also implemented special water conservation measures tailored to local conditions:

石家莊原子高科醫藥有限公司 – 水資源管理機制

Shijiazhuang Atomic High-Tech Pharmaceutical Company Limited – Water Resource Management Mechanism

石家莊原子高科醫藥有限公司建立系統化水資源管理機制,實施管線設備定期巡查制度,對供水管網、用水 終端設備(包括水管、水龍頭及衛生設施)進行全面檢修與維護,及時發現並修復滲漏問題,有效降低水資源 損耗。

Shijiazhuang Atom High-tech Pharmaceutical Co., Ltd. has established a systematic water resource management mechanism. It implements a regular inspection system for pipelines and equipment. Comprehensive maintenance and repair are carried out on water supply networks and end-use devices (including pipes, taps, and sanitary facilities) to promptly identify and fix leakage issues, thereby effectively reducing water loss.

中核海得威 – 中水回用處理系統

Headway – Reclaimed Water Reuse Treatment System

中核海得威建置專業化中水回用處理系統,透過多級淨化等技術,實現生產廢水的循環再利用,顯著提升水 資源回收利用率,有效降低新鮮水取用量。

Headway has installed a professional reclaimed water reuse treatment system. Through multi-stage purification and other technologies, it achieves the recycling and reuse of production wastewater, significantly improving the water resource recovery rate and effectively reducing the intake of fresh water.

綠色辦公

中國同輻將環保意識深度融入集團的日常 運營中,積極倡導綠色辦公理念,並通過 規範員工辦公措施,以減少環境影響並推 動資源的高效利用。以下為四大綠色辦公 措施:

節能減排與資源節約

Energy and Resource

Conservation

•

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GREEN OFFICE

CIRC deeply integrates environmental awareness into its daily operations, advocating for a green office concept by implementing standardized office measures to reduce environmental impact and promote the efficient use of resources. The following are the four major green office measures:

- 採購高效能設備:優先購買具有一級能源標籤的電器,如節能空調、冰箱等,以降低能源消耗。
 - **Procurement of high-efficiency equipment:** Priority is given to the purchase of appliances with a level 1 energy label, such as energy-efficient air conditioners and refrigerators, in order to reduce energy consumption.
- 推廣低耗能照明:全面使用LED燈等低耗能照明裝置,減少電力浪費。
 Promotion of low energy-consumption lighting: Full use of low energy-consumption lighting fixtures, such as LED lights, to reduce power wastage.
- 空調溫度控制:規定夏季室內空調溫度不得低於26°C,冬季室內空調溫度
 不得高於20°C,以實現節能目標。

Air-conditioning temperature control: It is stipulated that room airconditioning temperatures should not be lower than 26°C in summer and higher than 20°C in winter in order to achieve energy-saving targets.

員工節能教育:定期提醒員工下班後關閉所有電源,包括電腦、打印機等 辦公設備及照明設施。

Employee education on energy conservation: Employees are regularly reminded to switch off all power sources after work, including computers, printers and other office equipment and lighting facilities.

樓內巡視管理:加強辦公區域巡視,及時關閉無需使用的電源,避免能源 浪費。

Building inspection management: Strengthening the office area inspection, turn off the power supply that does not need to be used in a timely manner to avoid energy waste.

節水措施:安裝節水系統和設備,如節水水龍頭,並張貼「節約用水」環保 標語,提升員工節水意識。

Water conservation measures: Installing water conservation systems and equipment, such as water-saving taps, and posting of environmental slogans on 'Water Conservation' to raise staff awareness of water conservation.

資源再利用 Reuse of resources	 完善廢棄物回收系統:持續優化辦公室廢棄物回收系統,設置分類垃圾桶,引導員工對辦公廢紙進行合理再利用。 Improvement of the waste recycling system: Continuously optimizing the office waste recycling system, set up sorting bins, and guide employees to reasonably reuse office wastepaper. 推行無紙化辦公:加強員工教育,鼓勵雙面打印,倡導無紙化(OA)辦公,減少不必要的紙張使用。 Implementing a paperless office: Strengthening staff education, encouraging double-sided printing, advocating a paperless (OA) office, and reducing the unnecessary use of paper. 電子設備回收再利用: 統籌開展各類電子設備調配工作,落實電子設備的回收與再利用,減少電子廢棄物對環境的影響。 Recycling and reuse of electronic equipment: Co-ordinating the deployment of various types of electronic equipment, implement the recycling and reuse of electronic equipment, and reduce the impact of electronic waste on the environment.
會議與公文管理 Meetings and correspondence management	 嚴控會議規模:加強會議管理,逐步減少線下會議,降低因會議產生的資源消耗。 Strictly control the scale of meetings: Strengthening meeting management, gradually reduce offline meetings and reduce the consumption of resources arising from meetings. 推廣線上會議:加強線上會議技術支持,鼓勵召開線上會議,減少出差及相關碳排放。 Promoting online meetings: Enhancing technical support for online meetings and encourage online meetings to reduce travel and related carbon emissions. 公文管理優化:嚴格控制發文數量和規格,避免印發不必要的公文,進一步減少紙張使用。 Optimization of correspondence management: Strictly controlling the number and specifications of documents issued, avoiding the issuance of unnecessary correspondence and further reduction in the use of paper.
綠色出行與公務車管理 Green travel and official car management	 公務車更新換代:合理配置公務用車,逐步推行公務車更新換代工作,以低排放車型取代高排放車型。 Replacement of official vehicles: Rationalizing the allocation of official vehicles and gradual implementation of the replacement of official vehicles, replacing high-emission models with low-emission models. 公務車管理:完善公務車單車核算台賬,詳細記錄車輛耗油情況,並定期進行公務車檢修,保持良好車況。 Management of official vehicles: Improving the single-vehicle accounting ledger for official vehicles, keeping detailed records of vehicle fuel consumption, and conducting regular overhaul of official vehicles to maintain good conditions. 鼓勵綠色出行:提倡員工綠色出行,如乘坐公共交通工具、騎行或步行,減少公務用車需求。 Encourage green travel: Promoting green travel for employees, such as taking public transport, cycling or walking, to reduce the need for official vehicles.

加強污染防治

中國同輻制定《環境保護管理辦法》,明確 要求放射性廢物管理遵循「減量化、無害 化、妥善存儲及安全處置」原則,並規定 成員單位須採用成熟可靠的環保技術與措 施,規範環保設施運行維護,嚴格監控流 出物達標排放。

STRENGTHENING POLLUTION PREVENTION AND CONTROL

CIRC has formulated the *Environmental Protection Management Regulations*, mandating that radioactive waste management adhere to the principles of "reduction, harmlessness, secure storage, and safe disposal." The regulations require all member units to adopt mature and reliable environmental technologies and measures, standardize the operation and maintenance of environmental protection facilities, and strictly monitor effluent discharges to ensure compliance with standards.

污染物排放須符合國家及地方生態環境主 管部門標準與總量控制指標,重點排污單 位須依法安裝使用監測設備並保存原始記 錄,嚴禁通過暗管、滲井等逃避監管方式 違法排放。定期開展環境隱患排查與風險 評估,對重大隱患制定整改措施並落實管 控責任,同時針對可能引發環境事件的設 施或活動,完善風險控制、應急預案及事 後恢復機制,確保突發事件有效應對。

在廢棄物管理方面,本集團高度重視放射 性「三廢」(廢棄物一包括固體廢物、廢水 及廢氣)的規範化處理。為確保管理作業 的嚴謹性,我們配套制定了《輻射安全管 理辦法》《環境保護管理辦法》及《放射性 廢物管理規程》等內部規範文件,為放射 性廢棄物管理提供了明確的操作指引與制 度保障。 Pollutant emissions must meet the national and local ecological and environmental standards, including total discharge control targets. Key pollutant-discharging units are required to install and operate monitoring equipment in compliance with regulations, maintain original records, and strictly prohibit illegal discharges through unauthorized means such as illegal concealed pipes or seepage wells. CIRC conducts regular environmental risk assessments and hidden hazard investigations, implements corrective measures for major risks, and assigns accountability for risk control. For facilities or activities with potential environmental incident risks, the Group has strengthened risk mitigation protocols, emergency response plans, and post-incident recovery mechanisms to ensure effective management of contingencies.

The Group prioritizes the standardized treatment of radioactive "three wastes" (solid, liquid, and gaseous waste). To ensure rigorous management, CIRC has established internal guidelines such as the *Radiation Safety Management Regulations*, *Environmental Protection Management Regulations*, and *Radioactive Waste Management Procedures*. These documents provide clear operational protocols and institutional safeguards for the entire lifecycle of radioactive waste, from generation to disposal.

廢棄物治理

在本報告年度,本集團積極響應國家綠色 發展轉型戰略,全面落實廢棄物管理措 施,有效處理辦公過程中產生的有害及無 害廢棄物,避免因不當處置而產生的額外 成本。針對核醫藥業務的特殊性,我們嚴 格管理生產過程中產生的廢棄物,採取充 分措施以降低其對環境的潛在影響。通過 完善的管理體系和專業的處置流程,我們 確保各類廢棄物得到妥善處理,並持續優 化資源使用效率,致力於實現環境保護與 營運效率的平衡。

本集團始終致力於從根源上提升廢棄物管 理水平。我們從源頭減廢與提高廢棄物回 收率兩方面著手,設定明確的減廢目標, 並通過具體措施深入推動減廢工作的實 施,以實現更高效的資源利用與更低的環 境影響。

在生產過程中,我們嚴格遵循「減少產 生、分類收集」的原則,從源頭控制放射 性廢棄物的生成量,並對其生產、收集、 運輸及處置等各環節實施全流程監督管 理,確保每一環節均符合法規要求及內部 標準。此外,本集團設置了內部放廢庫, 用於暫時存放經過分類收集的放射性廢棄 物,並定期進行庫存動態盤點,及時將廢 棄物送至城市放廢庫進行專業處理。

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WASTE MANAGEMENT

During the Reporting Period, CIRC actively aligned with China's green development strategy, implementing comprehensive waste management measures to ensure proper handling of both hazardous and non-hazardous waste generated in office and operational activities. This proactive approach minimizes additional costs arising from improper disposal. Given the unique demands of the radiopharmaceutical business, CIRC strictly manages production-related waste and adopts robust measures to mitigate its environmental impact. Through refined management systems and specialized disposal protocols, the Group ensures all waste is treated appropriately while continuously optimizing resource efficiency, striking a balance between environmental protection and operational effectiveness.

CIRC is committed to elevating waste management practices at their source. By focusing on waste reduction and enhancing recycling rates, the Group sets clear reduction targets and implements concrete measures to drive efficiency in resource utilization and minimize environmental footprints.

In production processes, CIRC rigorously adheres to the principles of "reduce generation, classify collection" to control radioactive waste at its source. The entire lifecycle – from production, collection, and transportation to final disposal – is subject to full-process supervision to ensure compliance with regulatory requirements and internal standards. The Group maintains an internal radioactive waste storage facility for temporarily holding categorized radioactive waste, conducts regular inventory audits, and promptly transfers waste to municipal radioactive waste repositories for professional treatment.

在日常生產及科研工作中,本集團要求各 責任單位落實工藝改進與管理措施,以減 少廢物產生。例如,我們引入先進自動化 設備,提升效率並降低廢物生成;加強設 備維護保養,確保穩定運行,避免因故障 導致廢物增加;並持續優化工藝,解決因 工藝滯後或運行不暢而產生的廢物問題。 此外,我們注重員工教育培訓,尤其是崗 位操作的規範化培訓,提升操作技能與環 保意識,減少因人為失誤導致的廢物增 加。通過這些措施,我們從源頭控制廢物 產生,降低環境污染,推動企業可持續 發展。

在廢棄物管理方面,本集團不僅嚴格規範 處理流程,更從源頭著手,積極減少廢棄 物的產生。其中,附屬公司中核海得威通 過優化取樣方式及檢驗方法,嚴格落實廢 物分類與收集管理,有效降低了實驗室廢 物及放射性廢物的生成量。對於非放射性 廢棄物的管理,我們嚴格遵循《危險化學 品安全管理條例》及《常用化學危險品貯 存通則》等相關法規,並進一步細化制定 《危險化學品安全管理規定》及《醫療垃圾 管理辦法》等內部政策,以確保非放射性 廢棄物的分類、收集、貯存及處理過程符 合最高標準。為進一步降低對環境的潛在 影響,我們嚴格區分放射性廢棄物與非放 射性廢棄物的處理方式,確保兩者互不混 済,從而最大限度減少本集團生產經營及 科研活動可能產生的環境污染。

CIRC mandates operational units to implement process improvements and management measures aimed at reducing waste generation. Examples include introducing advanced automation equipment to enhance efficiency and lower waste output, strengthening equipment maintenance to ensure stable operations and avoid waste spikes caused by malfunctions; continuously refining production processes to address inefficiencies that lead to excess waste. Moreover, we prioritize employee training, particularly on standardized operational procedures, to improve technical skills and environmental awareness, thereby reducing human-error-induced waste. These measures enable CIRC to control waste generation at its source, mitigate environmental risks, and advance sustainable development.

In waste management, the Group not only strictly standardizes disposal procedures but also proactively reduces waste generation at the source. Subsidiaries like Headway have reduced laboratory and radioactive waste volumes by optimizing sampling methods and inspection protocols. For non-radioactive waste, CIRC strictly complies with regulations such as the Regulations on the Safety Management of Hazardous Chemicals and the General Rules for the Storage of Common Hazardous Chemicals. Internal policies, including the Hazardous Chemical Safety Management Regulations and Medical Waste Management Procedures, further standardize the classification, collection, storage, and disposal of such waste. To further minimize environmental risks, the Group strictly segregates radioactive and non-radioactive waste streams, ensuring no cross-contamination occurs during handling. This approach drastically reduces potential environmental impacts from production, R&D, and operational activities.

除了對廢棄物實施分類分級處理,硬件設 施的管理亦是確保廢棄物妥善排放與處理 的重要環節。為實現污染物的有效處理及 達標排放,本集團定期開展環境保護設備 設施的維修保養工作,並投入充足資源配 置符合現場監測要求的儀器與設備。同 時,我們設置專人負責環境保護專項工 作,確保各項環保措施落實到位。以附屬 公司中核海得威及中核安科鋭為例,其對 可能產生環境危害的位置進行重點標記與 監測,並配置報警裝置,制定應急演練方 案,定期檢查與維修相關設備,確保環境 風險的可測可控。此外,我們持續強化內 部隱患排查與環境風險評估工作,並主動 接受地方政府及上級單位的監督檢查,進 一步推動環境保護工作的深入落實。

Beyond categorized waste treatment, the management of hardware facilities is a critical component in ensuring safe waste discharge and disposal. To achieve effective pollutant treatment and regulatory-compliant emissions, the Group conducts regular maintenance of environmental protection equipment and allocates sufficient resources to deploy on-site monitoring instruments that meet technical standards. Dedicated personnel are assigned to oversee environmental compliance, ensuring all measures are rigorously implemented. For example, subsidiaries Headway and CNNC ACCURAY have implemented targeted protocols: highrisk environmental areas are clearly marked and continuously monitored; alarm devices are installed to detect anomalies, complemented by emergency response plans and regular drills; equipment undergoes periodic inspections and repairs to maintain operational reliability and risk control. Additionally, the Group intensifies internal risk assessments and hidden hazard investigations, while proactively collaborating with local governments and regulatory authorities for third-party oversight, further promoting the in-depth implementation of environmental protection.

有害廢棄物

針對有害廢物的處理,我們制定了具體要求,確保其處理過程符合安全與環保標 準,處理要求及措施如下:

- 放射性廢棄物應分類包裝、定點 存儲
- 在臨時場所暫存的放射性廢棄物應
 密封保存、標識清晰,並建立有關
 危險廢物管理台賬,記錄廢物的種
 類、數量、去向等信息
- 固體放射性廢棄物的轉移和貯存應 委託有資質的單位,交接時應辦理 手續並建檔保存
- 對可回收利用的危險性廢物進行資 源化處理,如廢舊放射源再利用等

HAZARDOUS WASTE

Specific requirements have been established for the handling of hazardous waste to ensure that the process meets safety and environmental standards, and the requirements and measures are as follows:

- Radioactive waste should be sorted, packed and stored at designated locations
- Radioactive waste temporarily stored in temporary places should be sealed, stored, labeled clearly, and relevant files should be established
 - The transfer and storage of solid radioactive waste shall be entrusted to a qualified unit, and shall go through formalities and file for storage upon handover
 - Resourceful treatment of hazardous waste that can be recycled, e.g., reuse of spent radioactive sources

在有害廢物分類管理方面,本集團尤其重 視危險廢物的妥善處理。我們嚴格執行國 家相關管理規定及《工業廢物管理制度》 《危化品、易制毒廢物管理辦法》等內部制 度,通過分類收集、設置危廢庫及專用容 器進行專門貯存,並張貼清晰合規的危廢 標籤,以防止二次污染的發生。針對危化 品的處理,本集團委託具備專業資質的廠 商機構按規執行,確保每一環節均符合安 全與環保要求。 In respect of the segregation and management of hazardous waste, the Group pays particular attention to the proper handling of hazardous waste. We strictly implement the relevant national regulations and internal systems such as the *Industrial Waste Management Regulations* and the *Procedures for Hazardous and Controlled Chemical Waste*, and prevent the occurrence of secondary pollution through separate collection, setting up of hazardous waste depots and special containers for special storage, and posting of clear and compliant hazardous waste labels. For the handling of hazardous chemicals, the Group has commissioned professionally qualified vendors to carry out the procedures in accordance with the regulations to ensure that each step of the process complies with the safety and environmental protection requirements.

本集團對於危化品處理的具體要求

Specific requirements of the Group for handling hazardous chemicals

對產生的危化品廢物(液體、固體)的種類、性質、數量、濃度、存放地點、存放方式和處理去向進行 如實記錄。

Record the type, nature, quantity, concentration, storage location, storage method, and disposal destination of hazardous chemical waste (liquid and solid) truthfully.

統一制定、嚴格管理危化品(液體、固體)的產生量和處理去向的台賬記錄,防止危化品廢物的非法使 用及流失。

Uniformly formulate and strictly manage the ledger records of the generation and disposal of hazardous chemicals (liquid and solid) to prevent the illegal use and loss of hazardous chemical waste.

- 對危化品廢物收集、暫存、申報和處置實行專人負責制,禁止隨意拋棄和處理。 Implement a special responsibility system for the collection, temporary storage, declaration, and disposal of hazardous chemical waste, prohibiting random disposal and treatment.
- 收集、存儲危化品廢物的容器及包裝物應符合相關標準,並要求附屬公司對存儲過程中可能發生的洩漏風險制定相應的防範措施。
 Collection and storage containers for hazardous chemical waste should comply with relevant standards, and subsidiaries are required to formulate corresponding preventive measures for possible leakage risks during storage.

2024年,生態環境部與核輻射安全中心 輻射源部積極推動廢源回收再利用工作, 中國同輻所屬中核高通在這一領域取得了 顯著成果: In 2024, the Ministry of Ecology and Environment and the Radiation Source Department of the Nuclear Radiation Safety Center actively promoted the recycling and reuse of waste sources, and CNGT, a subsidiary of CIRC, achieved remarkable results in this field:

廢源回收再利用成果 Disused Source Recycling Achievements

廢源再利用生產工業輻照源

Repurposing Disused Sources into Industrial Irradiation Sources

- 中核高通共計完成2,288枚、總活度達12.1萬居里的鈷-60廢源再利用,成功生產工業輻照源。 CNGT successfully repurposed 2,288 cobalt-60 disused radioactive sources with a total activity of 121,000 curies (Ci) into industrial irradiation sources.
- 完成了新型φ37mm×485mm工業輻照源包殼特殊形式放射性物品的設計,進一步提升了廢源再利用的 技術水平。

The Company completed the design of a novel φ 37mm×485mm industrial irradiation source cladding, a specialized form of radioactive material, further advancing technical capabilities in disused source recycling.

循環經濟理念的實踐

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Circular Economy Practices

減量化:通過廢源再利用,減少了資源消耗和放射性廢物的產生,降低了對國外放射性原料的依賴 度。

Reduction: By repurposing disused sources, the Group reduced resource consumption and radioactive waste generation, while decreasing reliance on imported radioactive raw materials.

- 再利用:將廢源再製造後繼續作為產品使用,充分挖掘了廢源的剩餘價值,實現了「變廢為寶」。
 Reuse: Through remanufacturing disused sources into functional products, CIRC maximizes their residual value, exemplifying the principle of "transforming waste into value."
- 再循環:將廢源作為原料繼續投入生產利用環節,大幅提高了資源利用效率。
 Recycling: Disused sources are reintroduced as raw materials into production cycles, significantly enhancing resource utilization efficiency.

無害廢棄物

在無害廢棄物管理方面,我們將其作為日 常經營的重要環節,並制定了明確的管理 目標與執行措施,確保本部和各附屬公司 嚴格落實相關要求。以下是具體的目標及 管理措施:

NON-HAZARDOUS WASTE

With regard to the management of non-hazardous waste, we have made it an important part of our daily operations and have set clear management objectives and implementation measures to ensure that our headquarters and subsidiaries strictly implement the relevant requirements. The following are specific objectives and management measures:

目標	管理措施
Targets	Management Measures
加強辦公室廢棄物回收 Strengthen recycling of office waste	 完善辦公室廢棄物回收系統,統計辦公室廢紙回收數量等 Improve the office waste recycling system, and count the amount of office wastepaper recycled, etc.
Unice waste	 > 鼓勵員工減少使用一次性產品,購買可重複使用的員工餐具等 Encourage employees to reduce the use of disposable products, purchase reusable employee tableware, etc.
回收再利用辦公室設備 Recycling and Reusing Office Equipment	 推動垃圾分類,提升廢物回收利用率(於各單位設置其他垃圾、可回收垃圾、 有害垃圾及廚餘垃圾 Promote waste classification, improve the waste recycling rate (set up bins for other waste, recyclable waste, hazardous waste, and food waste in each unit)

根據《廢物分類、收集及處理管理規程》, 本集團將一般工業廢物劃分為可回收與不 可回收兩類,並分別存放於專用工業垃圾 箱中,統一收集後交由專業廢物回收處理 部門進行處理。針對無害廢棄物,如紙 張、塑料、玻璃、金屬及生活垃圾等,我 們委託合作第三方廠商或交由廢品回收站 進行回收處理,確保做到日產日清,避免 廢棄物積壓。 In accordance with the *Waste Classification, Collection, and Disposal Management Regulations*, the Group categorizes general industrial waste into recyclable and non-recyclable types, storing them separately in dedicated industrial waste containers. After centralized collection, the waste is transferred to licensed professional waste disposal agencies for compliant treatment. For non-hazardous waste – such as paper, plastics, glass, metals, and general domestic waste – CIRC delegates disposal to certified third-party vendors or municipal recycling stations. The Group ensures daily clearance of such waste to prevent backlog accumulation, aligning with efficiency and hygiene standards.

廢水治理

為全面提升廢水治理效能,中國同輻建立 了系統化的廢水分類管理體系,嚴格執行 國家及地方環保標準,並持續推進生產工 藝優化,從源頭實現減污降耗。通過實施 以下具體措施,我們致力於構建廢水防治 體系,最大限度降低廢水排放及其環境 影響:

WASTEWATER TREATMENT

CIRC has established a systematic wastewater classification management system to improve treatment efficiency and reduce environmental impact. CIRC complies with national and local environmental protection standards, continuously optimizing production processes to achieve pollution reduction at the source. The following specific measures have been implemented to build a wastewater prevention and treatment system:

本集團對於廢水處理的具體要求

Specific requirements of the Group for treating wastewater

強酸性和有機放射性廢液處理

Strong Acid and Organic Radioactive Waste Liquids

- 嚴禁排放: 強酸性和有機放射性廢液不得排入放射性廢液管道,需單獨收集並使用專用包裝。
 Prohibited discharge: Strong acid and organic radioactive waste liquids must not be discharged into radioactive waste pipelines. These liquids should be collected separately and stored using dedicated packaging.
- 安全存放:由生產單位進行安全存放,並詳細記錄存檔,待公司統一貯存處理。
 Safe storage: The production unit is responsible for safely storing these waste liquids and maintaining detailed records for proper management. They will be sent for unified treatment by the Company.
- 合規管理:確保處理過程符合國家放射性廢物管理相關法規,避免對環境和人員造成危害。
 Compliance management: The treatment process must comply with relevant national radioactive waste management regulations to avoid harm to the environment and human health.

生活廢水處理

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Domestic Wastewater Treatment

管道排放:生活廢水通過廢水管道排放至城市污水管道。
Pipeline discharge: Domestic wastewater is discharged via the wastewater pipeline to the municipal sewage system.

排放標準:確保生活廢水符合國家相關排放標準,避免對城市污水處理系統造成負擔。

Compliance with discharge standards: CIRC ensures that domestic wastewater meets the national discharge standards, preventing additional burdens on the urban wastewater treatment system.

本集團對於廢水處理的具體要求(續)

Specific requirements of the Group for treating wastewater (Continued)

生產性廢水處理 Industrial Wastewater Treatment

- 第三方監測:委託第三方檢測機構對生產性廢水進行定期監測,監測指標包括pH值、懸浮物、化學需 氧量(COD)、陰離子表面活性劑、氨氮(NH3-N)、總磷(以P計)、石油類濃度等,確保數據均在限值內。 Third-party monitoring: A third-party monitoring agency regularly checks the industrial wastewater, including parameters such as pH value, suspended solids, chemical oxygen demand (COD), anionic surfactants, ammonia nitrogen (NH3-N), total phosphorus (as P), and petroleum content, ensuring that the data remains within acceptable limits.
- 污水站建設:部分單位建有污水處理站,確保排放水質滿足環評文件和標準要求。
 Wastewater treatment station: Some subsidiaries have wastewater treatment stations that ensure that discharged water meets the environmental assessment report and standard requirements.
- 合規排放:嚴格遵守排污許可相關要求,確保生產性廢水處理與排放合法合規。
 Legal discharge: CIRC strictly adheres to the requirements of the pollution discharge permit system to ensure that industrial wastewater treatment and discharge are legal and compliant.

源頭減量與工藝改進

Source Reduction and Process Improvement

- 改進生產工藝:通過優化生產流程和技術,減少生產性廢水的產生。
 Process optimization: CIRC improves production processes and technologies to reduce industrial wastewater generation.
- 改變處理方式:採用更高效的廢水處理技術,提升廢水處理效率,降低環境影響。
 Enhanced treatment methods: CIRC employs more efficient wastewater treatment technologies to improve treatment efficiency and reduce environmental impact.
- 資源化利用:探索廢水資源化利用的可能性,如中水回用等,進一步減少廢水排放量。
 Resource utilization: CIRC explores the possibility of recycling wastewater, such as through the use of reclaimed water, to further reduce the amount of wastewater discharged.

中核海得威 – 污水處理機制

Headway – Wastewater Treatment System

本集團對附屬公司實施嚴格的工業廢水排放管控體系,其中中核海得威已建立完善的環境管理機制:制定並 實施《環境監測方案》,建成日處理能力達20-30立方米的廠區污水處理站,實現工業廢水經處理後回用於沖 廁系統,年節水量達20立方米:針對危險廢液,嚴格執行專業化處置要求,委託具備相應資質的單位進行 規範化處理,杜絕任何形式的外排行為。同時,公司持續推進生產工藝優化升級,通過採用機械清洗等技術 替代傳統人工清洗方式,有效降低生產用水量。生活污水處理嚴格執行廣東省地方標準,並建立定期監測機 制,確保排放水質穩定達標。

Headway has implemented an efficient wastewater treatment system within its facility, which includes a treatment station capable of processing 20-30 cubic meters of wastewater per day. The treated water is recycled for use in toilet flushing, saving approximately 20 cubic meters of water annually. For hazardous waste liquids, the Company ensures professional disposal by a qualified third-party entity, eliminating any form of external discharge behavior. At the same time, Headway continues to promote the optimization and upgrading of production processes and effectively reduces production water consumption by adopting mechanical cleaning and other technologies to replace the traditional manual cleaning methods. The domestic sewage treatment strictly implements the local standards of Guangdong Province, and establishes a regular monitoring mechanism to ensure that the discharge water quality is stable and meets the standards.

廢氣治理

中國同輻對生產環節中產生的放射性廢氣 及揮發性有機物實施全過程管理。通過配 置專業化的廢氣處理裝置,確保各類廢氣 均經高效淨化處理後達標排放。同時,公 司在關鍵排放點位安裝了在線監測系統, 實現排放數據的實時監控與預警,構建起 覆蓋廢氣產生、處理、排放全流程的環境 風險防控體系。

WASTE GAS TREATMENT

CIRC manages radioactive waste gases and volatile organic compounds (VOCs) generated during production through a comprehensive treatment system. Specialized waste gase treatment equipment is used to ensure that all waste gases undergo high-efficiency purification before being released into the atmosphere. The Company also installs online monitoring systems at key discharge points to track emissions in real time and issue warnings, forming a full-process environmental risk prevention and control system for waste gas emissions.

本集團對於廢氣處理的具體要求

Specific requirements of the Group for treating waste gas

放射性廢氣處理 Radioactive Waste Gas Treatment

- 甲、乙級工作場所產生的放射性廢氣必須經過淨化過濾,確認達標後通過專用排風管道排入大氣。 Radioactive waste gas generated in class-A or B workplaces must be purified and filtered, and then discharged into the atmosphere through a dedicated exhaust pipe after reaching the standard.
- > 放射源操作過程中產生的放射性氣溶膠(包括鈷[⁶⁰Co]氣溶膠)需經核級過濾器過濾淨化後排放,並開展內部常規監測和外部定期監測,確保排放符合安全標準。 Radioactive aerosols (including cobalt ⁶⁰Co aerosols) generated during radioactive source operation need to be filtered and purified by a classification filter before discharge, and regular internal and external monitoring.

揮發性有機物處理

Volatile Organic Compounds Treatment

- 揮發性試劑(如甲醇、三甲苯、乙醇胺)需密封儲存在試劑罐內,並在通風櫥中進行配置。配置完成後,試劑需密封裝入容器,確保後續生產全過程均處於密封狀態。
 Volatile reagents (e.g., methanol, trimethylbenzene, ethanolamine) must be sealed and stored in reagent tanks, and prepared in fume hoods. After preparation, these reagents must be sealed in containers to ensure the entire production process remains in a sealed state.
- 揮發性有機物需經活性炭過濾裝置處理後排放,以減少對環境的影響。 VOCs are treated through activated carbon filtration devices before being discharged to minimize environmental impact.

廢氣排放監測 Waste Gas Emission Monitoring

安裝先進的廢氣監測設備,對廢氣排放進行實時監控。例如,在廢氣排放口安裝在線監測系統,對廢 氣中的污染物濃度、排放量等指標進行實時監測,確保排放數據符合環保要求。 Advanced waste gas monitoring equipment has been installed to track emissions in real time. Online monitoring systems are set up at emission points to monitor pollutants' concentration and discharge volume, ensuring compliance with environmental protection standards.

原子高科 – 優化生產、降低排放

HTA – Production Optimization and Emission Reduction

原子高科通過實施生產集約化管理,優化生產流程,有效縮短工時並降低排放強度。生產過程中產生的廢氣 經多級處理系統淨化,包括活性炭吸附裝置和原子能研究院專業廢氣處理系統,確保達標排放。

HTA has implemented production management practices that optimize the production process, reducing work hours and decreasing emission intensity. The waste gases generated during production are purified through a multi-stage treatment system, including activated carbon adsorption and a specialized waste gas treatment system within the Atomic Energy Institute, ensuring that emissions meet the required standards.

中核海得威 - 過濾淨化設備

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Headway – Filtration and Purification Equipment

中核海得威採用高效過濾淨化設備對廢氣進行處理,並建立第三方監測機制,每年委託具有資質的檢測機構 進行排放檢測,嚴格執行國家和地方排放標準。

Headway uses high-efficiency filtration and purification equipment to treat waste gases and has established a third-party monitoring mechanism, commissioning accredited testing agencies to perform emissions testing annually. The Company strictly adheres to national and local emission standards.

應對氣候變化

建立氣候韌性

除了積極實踐低碳營運,本集團亦高度關 注氣候變化對全球環境及業務運營所帶來 的頻率與嚴重程度不斷上升,這對本集團 的營運構成了潛在威脅。我們深知氣候變 化可能引發的物理風險,例如極端天氣、 降團的財產安全,造成財務損失,並對 務的穩定運營產生直接或間接影響。此 外,氣候變化亦可能帶來過渡風險,包括 因應更嚴格的法律法規及市場趨勢轉變而 調整營運模式。若未能及時應對這些變 化,可能導致資產價格波動或信貸狀況惡 化,從而對財務狀況造成不利影響。

面對日益嚴峻的氣候變化挑戰,本集團已 制定全面的應對策略並發佈《自然災害事 件專項應急預案》,規範中國同輻及所屬 各成員單位預防與應急準備、信息報告、 監測預警、應急響應等環節,降低極端天 氣對集團經營和員工健康的影響。此外, 我們亦要求旗下附屬公司定期開展風險識 別與評估工作。

ADDRESSING CLIMATE CHANGE

ESTABLISHING CLIMATE RESILIENCE

In addition to actively practicing low-carbon operations, CIRC is also deeply concerned about the profound impacts of climate change on global environments and business operations. Climate change, with its increasing frequency and severity of extreme weather events, poses potential threats to the Group's operations. We acknowledge the physical risks caused by climate change, such as extreme weather and changes in rainfall patterns, which can directly threaten the safety of company assets, cause financial losses, and impact business continuity. Moreover, climate change may also bring about transition risks, including operational adjustments required in response to stricter regulations and shifting market trends. If these changes are not addressed in a timely manner, they could lead to asset price fluctuations or deteriorating credit conditions, negatively affecting the Group's financial situation.

Given the growing challenges posed by climate change, the Group has developed a comprehensive strategy and issued the *Emergency Response Plan for Natural Disaster Events*, which standardizes CIRC and its subsidiaries prevention and emergency preparedness, information reporting, monitoring and early warning, and response procedures. This plan aims to mitigate the impact of extreme weather on operations and employee health. Additionally, we require the subsidiaries to regularly conduct risk identification and assessment to ensure that potential climate risks are adequately managed.

中核海得威 – 定期風險識別

Headway – Regular Risk Identification

中核海得威每年定期進行風險識別,重點關注極端天氣及自然災害(如颱風、暴雨等)可能帶來的實體風險。 此外,中核海得威針對颱風、暴雨等極端天氣事件,成立了專門的防汛抗颱工作組,並制定了《中核海得威 突發環境事件應急預案》。該預案根據不同的天氣情況,制定了相應的應對措施與程序,包括明確預警啟動 條件,並將災害事件分為不同預警等級。根據預警等級,啟動相應的應急預案,以最大限度地減少極端天氣 及自然災害對業務運營的影響。

Headway conducts regular risk identification each year, focusing on potential physical risks associated with extreme weather events, such as typhoons and heavy rain. In response to extreme weather, Headway has established a dedicated flood and typhoon response team and developed the *Emergency Response Plan for Environmental Emergencies*. This plan includes specific response measures and procedures based on different weather conditions. The plan defines the criteria for triggering early warning systems, classifies disaster events into different warning levels, and specifies the appropriate emergency response actions based on the warning level, thereby minimizing the impact of extreme weather and natural disasters on business operations.

中科安科鋭 – 預防環境突發事件 CNNC ACCURAY – Preventing Environmental Emergencies

中科安科鋭依據ISO 14001環境管理體系標準,制定並實施《環境應急準備和響應管理程序》,針對潛在的環境突發事件進行應急準備與響應,並開展綜合應急演練,提高員工對環境突發事件的應急處理能力。 CNNC ACCURAY follows the ISO 14001 Environmental Management System standard and has developed and implemented the *Environmental Emergency Preparedness and Response Management Program* to address potential environmental emergencies. This program includes comprehensive emergency drills to improve employees' ability to handle environmental incidents effectively.

本集團深知氣候變化對全球環境及企業營 運的重大影響,並將重大氣候因素及相關 風險納入集團整體安全管理框架內。我們 在日常運營中根據氣象信息進行研判和採 取相應措施,並儲備相應的應急物資和定 期組織開展演練。未來我們將持續關注氣 候變化帶來的風險與機遇,並通過制定與 實施相關策略,積極應對氣候變化所帶來 的挑戰,以確保業務的穩健發展與可持續 成長。

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The Group is fully aware of the significant impact of climate change on the global environment and business operations and has incorporated significant climatic factors and related risks into the Group's overall safety management framework. In our dayto-day operations, we make assessments and take appropriate measures based on weather information, stockpile appropriate emergency supplies and organize regular drills. In the future, we will continue to pay attention to the risks and opportunities brought about by climate change and actively respond to the challenges posed by climate change through the formulation and implementation of relevant strategies, so as to ensure the sound development and sustainable growth of our business.

低碳減排

本集團積極響應國家「雙碳」目標,於營 運及業務層面採取具體行動,全面深化氣 候變化管理水準,並持續強化氣候風險管 理能力。我們從上至下推動綠色轉型,致 力於實現低碳發展。

在溫室氣體排放方面,我們的主要來源為 辦公場所的外購電力。為此,我們制定了 針對性的減排策略,鼓勵員工節約能源, 減少電力消耗。具體措施包括在非辦公時 間關閉所有照明設備及非必要電器,以降 低因用電產生的溫室氣體排放。同時,我 們推動各部門充分利用數字化辦公工具, 減少商務差旅,並將線上會議納入標準作 業流程,從而降低不必要的燃料消耗。這 些舉措不僅有助於減少碳排放,更能提升 營運效率。

此外,我們積極推行「綠色採購」政策, 優先採購對環境影響較低的產品與服務, 重點選擇採用清潔生產工藝的供應商,全 面貫徹綠色環保理念。在交通運輸方面, 我們制定了綠色交通行動計劃,明確分類 指標及執行方案,並設立主導部門與執行 機構,以確保車輛溫室氣體排放的有效控 制。特別是在公務車管理方面,我們通過 細化油耗記錄、定期檢修等措施,持續提 升公務車輛的能源效率,進一步減少排 放。

CARBON EMISSION REDUCTION

The Group is actively responding to the national "dual carbon" goals (carbon peaking and carbon neutrality) and is taking concrete actions at both operational and business levels to enhance its climate change management capabilities. We are committed to a green transformation, working towards low-carbon development throughout its operations.

In terms of greenhouse gas emissions, our primary source is purchased electricity for its office facilities. To address this, CIRC has formulated targeted emission reduction strategies, such as encouraging employees to conserve energy and reduce electricity consumption. Specific measures include turning off all lighting and non-essential electrical devices after working hours to reduce greenhouse gas emissions from electricity use. We also encourage departments to make full use of digital office tools to reduce business travel and integrates online meetings into standard operating procedures, thus reducing unnecessary fuel consumption. These initiatives not only help reduce carbon emissions but also enhance operational efficiency.

In addition, we have implemented a "Green Procurement" policy, prioritizing the purchase of environmentally friendly products and services. CIRC selects suppliers who use clean production processes, fully aligning with green environmental principles. In terms of transportation, CIRC has established a green transportation action plan with specific targets and implementation measures. The company has set up a leading department and execution organization to ensure effective control over vehicle emissions. Particularly in the management of company vehicles, the company refines fuel consumption records, conducts regular vehicle maintenance, and enhances energy efficiency, thereby reducing emissions.

共建生態文明

綠色經營

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本集團始終秉持環境保護與可持續發展的 理念,高度關注營運活動對周邊環境的潛 在影響,並嚴格要求旗下附屬公司落實放 射性固體廢物的最小化管控措施。為確保 放射性廢物的安全管理,我們在年度安全 環保目標責任書中明確設定了當年的最小 化排放目標值,並持續監督執行情況。

在報告期內,我們針對非密封放射性物質 工作場所進行了放射性氣體無組織排放的 技術改造,進一步加強對放射性氣體排放 的控制,從而顯著提升了工作場所及周邊 環境的質量。根據《環境因素辨識、評價 和控制措施確認程序》的要求,各單位定 期開展環境因素的識別與評估,並制定相 應的控制措施,以確保環境風險得到全面 管控。

CO-BUILDING ECOLOGICAL CIVILIZATION

GREEN OPERATIONS

The Group adheres to the principles of environmental protection and sustainable development, placing a high priority on minimizing the environmental impact of its operations. The Group requires its subsidiaries to implement the most effective measures for managing radioactive solid waste. We have clearly set goals for minimizing emissions in the annual safety and environmental protection objectives and continuously monitors the execution of these measures.

During the Reporting Period, we undertook technological improvements to control unsealed radioactive material emissions at workplaces that handle such materials. This further strengthened the control of radioactive gas emissions, significantly improving the quality of workplaces and surrounding environments. According to the *Environmental Factors Identification, Evaluation, and Control Measures Confirmation Procedure*, each unit regularly identifies and evaluates environmental factors, implementing corresponding control measures to ensure comprehensive environmental risk management.

本集團在安全管理方面採取系統化的措 施,特別是在新建、改建、擴建、安全整 改、運行及退役放射性工作場所的過程 中,嚴格執行[三同時]管理制度,即污 染防治設施與主體工程同步設計、同步施 工、同步驗收投產。此外,我們組織專業 團隊進行環境影響評價和驗收檢測,落實 風險防範措施,確保環境風險處於可控範 圍。為進一步提升應急處置能力,本集團 制定並完善了一系列應急預案,包括《安 全生產事故綜合應急預案》《輻射安全事 故緊急預案》《輻射安全應急預案工作指 導》《輻射事故專項應急預案》及《工業安 全生產事故應急預案》,以規範應急處置 流程,最大限度地减少洩漏事故的發生及 其對環境的影響。

為確保各類廢物的安全處置,中核海得威 及中核安科鋭將環境保護工作納入相關部 門的月度及年度考核中,通過考核促進環 境保護工作的落實。同時,我們成立了 EHS委員會,負責公司安全、環境保護及 職業衛生管理。中核高通則已建立環境管 理系統,並取得外部認證,進一步提升了 環境管理的專業化水平。

展望未來,中國同輻將持續以生態文明建 設為核心目標,積極扮演參與者、貢獻者 及引領者的角色。我們將堅守綠色發展理 念,全面推動綠色生產模式的轉型與升 級,降低集團運營對生物多樣性的影響, 攜手共建綠色未來。

In safety management, the Group implements systematic measures, especially in new construction, renovation, expansion, safety rectification, operation, and decommissioning processes for radioactive workplaces. It strictly follows the "three simultaneous" management system, which mandates that pollution prevention facilities, main construction works, and acceptance checks are designed, built, and accepted simultaneously. Furthermore, we organize professional teams to conduct environmental impact assessments and acceptance inspections, implementing risk prevention measures to ensure environmental risks are controlled. To improve emergency response capabilities, the Group has developed and improved a series of emergency plans, including the Comprehensive Emergency Plan for Production Safety Accidents, Emergency Plan for Radiation Safety Accidents, Guidelines for Radiation Safety Emergency Response, and Special Emergency Plan for Radiation Accidents, to regulate emergency handling procedures and minimize leakage incidents and their environmental impact.

To ensure the safe disposal of all kinds of wastes, Headway and CNNC ACCURAY have included environmental protection in the monthly and annual assessment of relevant departments, and promoted the implementation of environmental protection through the assessment. Meanwhile, we have set up an EHS committee responsible for the Company's safety, environmental protection and occupational health management. CNGT, on the other hand, has established an environmental management system and obtained external certification, which further enhances the professional level of environmental management.

Looking ahead, CIRC will continue to take the construction of an ecological civilization as our core objective, and actively play the role of a participant, contributor and leader. We will adhere to the concept of green development, comprehensively promote the transformation and upgrading of green production mode, reduce the impact of the Group's operations on biodiversity, and work together to build a green future.

環保培訓

中國同輻不僅制定了一系列環保管理措施,更是組織面向全體員工的宣講活動, 進一步植入環保理念,深化集團綠色文 化。公司通過定期舉辦環保培訓、專題講 座以及互動式工作坊等,向員工傳遞最新 的環保政策、技術和實踐案例,幫助員工 深入理解環境保護的重要性。同時,中國 同輻還利用內部宣傳平台,持續推送環保 知識和綠色行動倡議,營造全員參與的環 保氛圍。

2024年度,根據中核集團開展「6.5環境 日」宣傳活動的要求,中國同輻以「全面 推進美麗中國建設」為主題,圍繞2024年 世界環境日主題「土地修復、荒漠化和乾 旱韌性」,組織各部門及成員單位開展了 一系列豐富多彩的宣傳活動。

ENVIRONMENTAL PROTECTION TRAINING

In addition to establishing a range of environmental management measures, CIRC also organizes educational activities for all employees to deepen their environmental awareness and promote green culture within the organization. The Company regularly holds environmental protection training sessions, themed lectures, and interactive workshops to share the latest environmental protection policies, technologies, and best practices. These activities help employees better understand the importance of environmental protection and engage them in sustainable practices. Meanwhile, CIRC also utilized internal publicity platforms to continuously push out environmental protection knowledge and green action initiatives, creating an environmentally friendly atmosphere with full participation of all employees.

In 2024, in line with the CNNC's "6.5 Environmental Day" campaign, CIRC organized a series of engaging environmental awareness activities under the theme of "Comprehensively Promoting the Construction of a Beautiful China", and cantered on the theme of the World Environment Day 2024, "Land Remediation, Desertification and Drought Resilience".

案例:中國同輻6.5環境日答題活動 Case Study: CIRC's 6.5 Environmental Day Quiz

中國同輻積極響應中核集團的號召,組織各部門及成員單位參與「6.5環境日」答題活動,共計2,475人參 與。此次答題活動以環境保護為核心,內容涵蓋環保政策、生態文明建設以及日常環保實踐等多方面知 識,旨在通過寓教於樂的形式,進一步提升員工的環保意識和知識水平。

CIRC responded enthusiastically to the call from China National Nuclear Corporation, organizing participation from various departments in the "6.5 Environmental Day" quiz competition. A total of 2,475 employees participated. The quiz covered a wide range of topics, including environmental protection policies, ecological civilization, and everyday environmental practices. The goal of the event was to use a fun and interactive format to raise employee awareness and deepen their knowledge of environmental issues.

案例:原子高科海報宣傳

Case Study: HTA's Environmental Poster Campaign

原子高科本部及其各子公司通過張貼及轉發主題海報等進行六五環境日宣傳,累計宣傳受眾人數約 1,000人。

HTA along with its subsidiaries, has been actively promoting environmental awareness through the use of posters and other materials, the cumulative number of audience reached was about 1,000.



原子高科宣傳欄 HTA's Poster Board

案例:中核高能辦公區宣傳 Case Study: CNNCHE's Internal Environmental Posters

中核高能製作了以「全面推進美麗中國建設」為主題的宣傳海報,宣傳海報在公司內部各個區域進行黏 貼,包括辦公樓、車間、員工食堂等,營造了濃厚的環保氛圍。同時,中核高能還通過社交媒體等平 臺,將海報分享給更廣泛的受眾。

CNNCHE has created posters centred on the theme of "Promoting Beautiful China Construction" and displayed them in various areas of the company, including the office buildings, workshops, and cafeterias, creating an environmental awareness atmosphere. CNNCHE also shared these messages through social media platforms to extend the reach of the environmental campaign.



中核高能辦公區宣傳海報 CNNCHE's Internal Environmental Posters

環境表現概覽7

OVERVIEW OF ENVIRONMENTAL PERFORMANCE⁷

		2024年度	2023年度
	計量單位	數據	數據
	Unit	2024 Data	2023 Data
Air Pollutant Emission			
NO _x 排放量	噸	4.22	2.66
NO _x emission	Tonnes		
SO _x 排放量	噸	0.004	0.001
SO _x emission	Tonnes		
PM排放物	噸	0.08	0.05
PM emission	Tonnes		
溫室氣體排放			
Greenhouse Gas Emission			
溫室氣體排放(範圍1) [®]	噸二氧化碳當量	2,804.18	484.06
GHG emission (scope 1) ⁸	tCO ₂ e		
溫室氣體排放(範圍2)%	噸二氧化碳當量	24,434.42	6,317.84
GHG emission (scope 2) ⁹	tCO ₂ e		
總溫室氣體排放量	噸二氧化碳當量	27,238.61	6,810.90
Total GHG emission	tCO ₂ e		
總溫室氣體排放量密度	噸二氧化碳當量/億元收入	359.60	102.52
Total GHG emissions intensity	tCO ₂ e/RMB100 million of revenue		

- 因2024年度環境數據的披露口徑擴大至 業務全範圍,相關指標數據相應增多。
- 此處的溫室氣體排放來源於本年度車 輛、工程機械、柴油發電機和所消耗的 製冷劑產生的直接溫室氣體排放,以及 新種植樹木的溫室氣體減除,計算方法 參考聯交所發佈的《附錄二:環境關鍵績 效指標匯報指引》、中華人民共和國生態 環境部發佈的《陸上交通運輸企業溫室氣 體排放核算方法與報告指南(試行)》以及 中華人民共和國國家發展和改革委員會 發佈的《工業其他行業企業溫室氣體排放 核算方法與報告指南(試行)》。
- 此處的溫室氣體排放來源於外購蒸汽和 外購電力在生產過程中所產生的間接溫 室氣體排放,計算方法參考中華人民共 和國國家發展和改革委員會發佈的《工業 其他行業企業溫室氣體排放核算方法與 報告指南(試行)》和生態環境部聯合國家 統計局印發的《關於發佈2022年電力二 氧化碳排放因子的公告》。

As the disclosure of environmental data for the year 2024 has been expanded to the full scope of the business, there is a corresponding increase in data quantity for related indicators.

- Greenhouse gas emissions here are direct greenhouse gas emissions generated by vehicles, construction machinery, diesel generators and refrigerants consumed during the Year, as well as greenhouse gas removals from newly planted trees. The calculation methods are based on the Appendix II: Reporting Guidance on Environmental KPIs issued by the Stock Exchange, the Guidelines for Accounting and Reporting Greenhouse Gas Emissions from Road Transport Enterprises (Trial) issued by the Ministry of Ecology and Environment of the People's Republic of China, and the Guidelines for Accounting and Reporting Greenhouse Gas Emissions from Other Industrial Enterprises (Trial) issued by the National Development and Reform Commission of the People's Republic of China.
- The greenhouse gas emissions here are derived from indirect greenhouse gas emissions generated during the production process of purchased steam and purchased electricity. The calculation methods are based on the Guidelines for Accounting and Reporting Greenhouse Gas Emissions of Enterprises in Other Industries (Trial) issued by the National Development and Reform Commission of the People's Republic of China and the Announcement on the Release of 2022 CO₂ Emission Factors coissued by the Ministry of Ecology and Environment and National Bureau of Statistics of China.

Energy Use	
外購電力總量 千個千瓦時	5
Total purchased electricity kWh in '000s	
外購電力密度 千個千瓦時/億元收入 581.70 196.72	2
Purchased electricity intensity KWh in '000s/RMB100 million	
of revenue	
光伏發電總量 千個千瓦時 187.87	/
Total photovoltaic power generated kWh in '000s	
光伏發電密度 千個千瓦時/億元收入 2.48	/
Intensity of photovoltaic power generated KWh in '000s/RMB100 million	
of revenue	
外購蒸汽總量 千個千瓦時 1,996.38 149.82	2
Total purchased steam kWh in '000s	
外購蒸汽密度 千個千瓦時/億元收入 26.36 2.26	6
Purchased steam intensity KWh in '000s/RMB100 million	
of revenue	,
外購天然氣總量 千個千瓦時 481.34 /	/
Total purchased natural gas kWh in '000s	,
外購天然氣密度 千個千瓦時/億元收入 6.35	/
Purchased natural gas intensity KWh in '000s/RMB100 million	
of revenue	~
汽油(汽車)消耗總量 千個千瓦時 3,948.48¹⁰ 222.32	2
Total gasoline (vehicle) consumption kWh in '000s	~
汽油(汽車)消耗密度 千個千瓦時/每輛汽油汽車 71.79 9.26	6
Intensity of gasoline (vehicle) consumption kWh in '000s/per gasoline vehicle柴油(汽車)消耗總量千個千瓦時4,384.79625.52	0
柴油(汽車)消耗總量 干個千瓦時 4,384.79 625.52 Total diesel (vehicle) consumption kWh in '000s 625.52	2
柴油(汽車)消耗密度 千個千瓦時/每輛柴油汽車 168.65 52.13	2
末油(7(半)) 月代音及 「個子及時 / 亞斯末油/1年 108.05 52.16 Intensity of diesel (vehicle) consumption kWh in '000s/per diesel vehicle	0
總能源使用量 千個千瓦時 55,061.21 14,049.71	1
Total energy use kWh in '000s	
總能源使用密度 千個千瓦時/億元收入 726.90 211.75	5
Intensity of total energy use KWh in '000s/RMB100 million	5
of revenue	

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¹⁰ 該數據包含汽車使用的純汽油及乙醇汽 油消耗總量。 This data includes the total consumption of pure gasoline and ethanol gasoline used for vehicles.

	원 E 명 스	2024年度	2023年度
	計量單位 Unit	數據 2024 Data	數據 2023 Data
Use of Water Resources			
新鮮水總使用量	噸	184,724.10	/
Total fresh water use	Tonnes		
新鮮水總使用密度	噸/億元收入	2,438.67	/
Intensity of total fresh water use	Tonnes/RMB100 million of revenue		
循環水總使用量	噸	4,952.00	/
Total recycled water use	Tonnes		
循環水總使用密度	噸/億元收入	65.37	/
Intensity of total recycled water use	Tonnes/RMB100 million of revenue		
總耗水量	噸	189,676.10	56,762.28
Total water consumption	Tonnes		
總耗水密度	噸/億元收入	2,504.04	855.50
Total water consumption intensity	Tonnes/RMB100 million of revenue		
包裝材料			
Packaging Materials			
包裝材料總量	噸	1,726.78	5,399.89
Total packaging materials	Tonnes		
包裝材料總量密度	噸/億元收入	22.80	81.38
Total packaging material intensity	Tonnes/RMB100 million of revenue		
有害廢棄物11			
Hazardous Waste ¹¹			
廢源產生量	枚	3,705	260
Radiation source generated	Pieces		
廢源產生密度	枚/億元收入	48.91	3.92
Intensity of radiation source generated	Pieces/RMB100 million of revenue		
廢水排放			
Waste water discharge			
廢水排放量	立方米	48,000.00	2,790.00
Waste water discharge	Cubic metres	000.00	10.05
廢水排放量密度	立方米/億元收入	633.68	42.05
Intensity of wastewater discharge	Cubic metres/RMB100 million		
	of revenue		

部分有害及無害廢棄物數據因涉及保密 研發單位無法統計,或產生量較小,不 在本年度報告中進行單獨披露。集團產 生的有害及無害廢棄物均嚴格按照標準 規範和環評文件進行處置。 Some hazardous and non-hazardous waste data are not separately disclosed in this Report as they cannot be counted by the confidential research and development unit or are generated in small quantities. Hazardous and non-hazardous wastes generated by the Group are disposed of in strict accordance with the standards and specifications and environmental assessment documents.
價值共創[,]協同共贏 CO-CREATING VALUE, ACHIEVING SYNERGISTIC WINS

集團品牌價值

作為一家將可持續發展納入為核心理念的 企業,中國同輻深刻認識到品牌價值對於 企業長期經營的重要性。憑藉在核技術應 用領域的深耕細作,我們持續貫徹「產品 與服務並重」的發展方針,不僅為品牌注 入源源不絕的創新動能,更致力為客戶、 股東及各利益相關方創造長期且穩健的價 值回報。

近年來,中國同輻始終以「驅動產業進 步,核力造福人類」的品牌理念為指引, 全面優化品牌定位與架構體系。我們透過 精準的品牌策略規劃,確保品牌發展與企 業成長階段相契合,實現品牌資產的有效 傳遞與價值提升。同時,我們更著重於品 牌資產的持續積累,透過多元化的品牌建 設舉措,進一步強化品牌在市場中的競爭 優勢,為企業的可持續發展奠定堅實基 礎。

BRAND VALUE OF THE GROUP

As an enterprise with sustainable development as its core philosophy, CIRC deeply recognizes the importance of brand value for long-term business operation. With the deep ploughing in the field of nuclear technology application, we continue to carry out the development policy of "equal emphasis on products and services", which not only injects the brand with unceasing innovation momentum, but also endeavors to create long-term and steady value returns for customers, shareholders and all stakeholders.

In recent years, CIRC has always been guided by the brand concept of "Driving Industrial Progress, Benefiting Mankind with Nuclear Power", and has comprehensively optimized its brand positioning and architecture system. Through precise brand strategy planning, we ensure that the brand development matches the growth stage of the enterprise, and realize the effective transmission of brand assets and value enhancement. At the same time, we focus on the continuous accumulation of brand equity, and through diversified brand building initiatives, we further strengthen the brand's competitive advantage in the market, laying a solid foundation for the sustainable development of the enterprise.



中國同輻品牌體系 CIRC Branding System

科技創新研發

強化科技研發

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中國同輻深入分析「十四五」期間國內外 經濟發展趨勢,以改革創新為驅動力,聚 焦經濟效益提升與高質量發展,確立「投 控源頭、做強核心、擴張應用」的戰略路 徑,致力於實現核技術應用產業「做大做 強做優」的目標,積極融入國內國際「雙 循環」新發展格局。集團重點佈局核醫療

RESEARCH AND DEVELOPMENT IN TECHNOLOGICAL INNOVATION

STRENGTHENING TECHNOLOGY RESEARCH AND DEVELOPMENT

CIRC conducted a thorough analysis of domestic and international economic development trends during the "14th Five-Year Plan" period. Driven by reform and innovation, CIRC focuses on enhancing economic efficiency and high-quality development. It has established a strategic path of "investing in sources, strengthening cores, and expanding applications", committed to achieving the goal of "enlarging, strengthening, and optimizing" the nuclear technology application industry, and actively integrating into the new development pattern of "dual circulation" both domestically and internationally.

健康與輻照應用兩大產業方向,全面加速 核素、核藥、核醫療裝備、核醫學整體解 決方案、放射源及應用、輻照應用等產業 發展,努力將自身打造成為資源控制力 強、產業佈局合理、管理體系高效、具備 自主創新能力的國際核技術應用產品與服 務供應商。 The Group prioritizes the strategic layout in two major industries: nuclear medical health and radiation application. It comprehensively accelerates the development of industries including radionuclides, nuclear medicine, nuclear medical equipment, integrated solutions for nuclear medicine, radiation sources and their applications, and radiation applications. CIRC strives to become a supplier of international nuclear technology application products and services with strong resource control, rational industrial layout, efficient management systems, and independent innovation capabilities.

科技創新研發

強大的研發實力是本集團的核心競爭力, 我們的研發團隊不斷在開發新產品、優化 生產技術以及推動現有產品的安全和功效 升級方面潛心鑽研。我們積極推進自主創 新研究,並取得顯著成果。本集團持續推 進「1+N」研發平台體系建設,積極開展省 部級研發平台建設,目前作為主依託單位 或參建單位,共設立16個省部級及以上 層級研發平台,目前所屬成員單位共有24 個高新技術企業。於報告期內,本集團研 發投入達6.6億元,同比增長3.3%,投入 強度達到8.6%。

此外,集團持續強化科技創新領軍人才隊 伍建設。我們現擁有外籍高端人才1人、 國家級人才9人,省部級人才11人,首席 專家2人,技術帶頭人10人,由507名研 發人員組成的研發團隊專注於鑽研及優化 生產技術、新產品開發及現有產品的安全 和功效升級,共同推進本集團各產業領域 的科技創新工作。此外,本集團設有人社 部博士後科研工作站、深圳市博士後創新 實踐基地、江蘇省放射性藥物研究生工作 站及蘇州大學輻照應用研究生工作站,積 極開展博士後及研究生的培養工作,不斷 加強人才隊伍建設。

為進一步激發員工創新活力,我們制定 了《科技創新激勵獎勵辦法》,並發佈《科 學技術獎評選管理辦法》等獎勵機制,通 過制度化的激勵措施,營造良好的創新氛 圍,推動企業持續創新與發展。

TECHNOLOGY INNOVATION AND R&D

Strong R&D capabilities are the core competitiveness of the Group. Our R&D team continuously focuses on developing new products, optimizing production technologies, and upgrading the safety and efficacy of existing products. We actively promote independent innovation research and have achieved significant results. The Group continues to advance the construction of the "1+N" R&D platform system and actively participates in provincial and ministerial-level R&D platform construction. Currently, as a primary or co-building unit, we have established 16 provincial and ministerial-level and above R&D platforms. Additionally, our member units include 24 high-tech enterprises. During the Reporting Period, our R&D investment reached 660 million RMB, a 3.3% increase compared to the previous year, with an investment intensity of 8.6%.

Furthermore, the Group continues to strengthen the development of a leading talent team in technological innovation. We currently have 1 foreign high-end talent, 9 national-level talents, 11 provincial and ministerial-level talents, 2 chief experts, and 10 technical leaders. Our R&D team consists of 507 members who are dedicated to researching and optimizing production technologies, developing new products, and upgrading the safety and efficacy of existing products. The team collectively advances technological innovation across our Group's industrial sectors. Additionally, the Group has established several postdoctoral research stations, including those supported by the Ministry of Human Resources and Social Security, the Shenzhen Postdoctoral Innovation Practice Base, Jiangsu Province's Radiopharmaceutical Graduate Workstation, and Suzhou University's Radiation Application Graduate Workstation, where we actively cultivate postdoctoral researchers and graduate students, continuously strengthening our talent team.

To further stimulate employee innovation, we have implemented the "Technology Innovation Incentive and Reward Measures" and published the "Scientific and Technological Award Evaluation Management Measures," creating a positive innovation atmosphere and promoting the continuous innovation and development of the Company through institutionalized incentives.

科技成果轉化

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本年度,中國同輻新獲專利授權224項 目,其中發明專利65項、實用新型專利 153項、外觀專利6項。此外,中國同輻 堅持將所獲得的科研成果進行轉化,於報 告期內推出7項上市新產品及服務。

TECHNOLOGY ACHIEVEMENT TRANSFORMATION

This year, CIRC has been granted 224 new patents, including 65 invention patents, 153 utility model patents, and 6 design patents. Additionally, CIRC is committed to the transformation of its scientific and research achievements into practical applications, launching 7 new products and services to the market within the Reporting Period.

案例:自主創新研究成果

Example: Independent Innovation Research Achievements

本集團始終致力於顯像診斷及治療性藥品的創新研發,以填補中國醫療領域的技術空白並滿足臨床需求。2024年,我們在多項放射性藥品研發中取得突破性進展:

The Group has always focused on the innovation and development of imaging diagnostic and therapeutic drugs to fill the technological gaps in China's healthcare field and meet clinical needs. In 2024, we achieved groundbreaking progress in several radiopharmaceutical developments:

- **氟[1°F]化鈉注射液**:於2024年9月3日獲國家藥品監督管理局頒發藥品註冊證書並正式上市,成為 我國首個用於骨顯像領域的PET診斷顯像劑,標誌著國內相關市場空白被成功填補。
- Fluorine-18 Sodium Fluoride Injection: On September 3, 2024, it was granted a drug registration certificate by the National Medical Products Administration and officially launched. It became the first PET diagnostic imaging agent in China for bone imaging, successfully filling a market gap.
- **氟[1⁸F]吡酰胺注射液**:於2024年12月24日通過國家藥監局審查,獲准進入臨床試驗階段,進一步 拓展了診斷顯像劑的應用潛力。
- **Fluorine-18 Pyrazine Injection:** On December 24, 2024, passed the National Medical Products Administration review and was approved for clinical trial, further expanding the application potential of diagnostic imaging agents.

截至2024年12月31日,我們擁有豐富的放射性藥品研發管線,覆蓋多個臨床階段: As of December 31, 2024, we have a rich pipeline of radiopharmaceuticals under development, covering multiple clinical stages:

- Ⅲ期臨床試驗階段:碘[¹³¹I]-MIBG注射液、鎝[⁹⁹mTc]硫化膠體注射液、⁶⁸Ga-Dotatate注射液、氟 [¹⁸F]司他明注射液、鑥[¹⁷⁷Lu]氧奥曲肽注射液等產品正加速推進;
- Phase III Clinical Trials: Products such as Iodine-131 MIBG Injection, Technetium-99m Sulfur Colloid Injection, Gallium-68 Dotatate Injection, Fluorine-18 Siteman Injection, and Lutetium-177 Oxytocin Injection are accelerating.
- **I期臨床完成**:氟[¹⁸F]貝他嗪注射液已完成I期試驗,驗證初步安全性;
- Phase I Clinical Trials Completed: Fluorine-18 Betaxine Injection has completed Phase I trials, confirming preliminary safety.
- 臨床試驗批准:氟[¹⁸F]-L多巴注射液獲批進入臨床研究;
- Clinical Trial Approval: Fluorine-18 L-DOPA Injection has been approved for clinical research.
- **臨床前研發**:多項顯像診斷及治療用放射性藥品正進行前期研究,為未來佈局儲備創新動能。
- **Preclinical Development:** Several imaging diagnostic and therapeutic radiopharmaceuticals are undergoing early-stage research, laying the foundation for future innovations.

知識產權保護

我們秉持「保護知識產權就是保護創新」 理念,嚴格遵守《中華人民共和國專利 法》《中華人民共和國著作權法》《國防專 利條例》《中華人民共和國反不正當競爭 法》及《中華人民共和國促進科技成果轉 化法》等相關法律法規,在科技創新和知 識產權保護工作中持續投入資源。

我們同步構建系統化知識產權管理體系, 制定《知識產權管理辦法》《專利分類分級 管理要求》等系列制度,明確技術成果權 屬劃分、專利佈局規範(含國內外申報指 引)及高價值專利培育機制,並通過《商 標管理細則》強化核心商標分級管控,形 成從創新保護到成果轉化的全流程制度支 撐,為科技研發與產業發展提供法律與管 理雙重保障。

在知識產權保護方面,我們將相關工作貫 穿於科研項目的全生命週期管理:在立項 階段,將知識產權策劃納入項目任務合同 書;在項目實施過程中,定期調整知識產 權佈局,並針對可能涉及技術或產品出口 的項目,提前開展國際專利策劃。針對不 同類型的知識產權,我們採取分類保護策 略,全面強化企業知識產權戰略的引導作 用。

INTELLECTUAL PROPERTY PROTECTION

We adhere to the philosophy that "protecting intellectual property is protecting innovation" and strictly comply with relevant laws and regulations such as the *Patent Law of the People's Republic of China*, We adhere to the philosophy that "protecting intellectual property is protecting innovation" and strictly comply with relevant laws and regulations such as the *Patent Law of the People's Republic of China, Copyright Law of the People's Republic of China, National Defense Patent Regulations, Anti-Unfair Competition Law of the People's Republic of China,* and *Law of the People's Republic of China on the Promotion of the Transformation of Scientific and Technological Achievements.* We continue to invest resources into technological innovation and intellectual property protection.

We are also establishing a systematic intellectual property management framework and have formulated a series of regulations such as the *Intellectual Property Management Measures* and *Patent Classification and Grading Management Requirements*. These regulations clarify the ownership division of technological achievements, patent layout standards (including domestic and international filing guidelines), and mechanisms for cultivating high-value patents. Through *the Trademark Management Rules*, we strengthen the graded management of core trademarks, creating a full-process institutional support system from innovation protection to achievement transformation, providing dual legal and managerial guarantees for technological R&D and industrial development.

In terms of intellectual property protection, we integrate related work throughout the entire lifecycle management of scientific research projects: At the project initiation stage, intellectual property planning is incorporated into the project task contracts; during the implementation of the project, we regularly adjust the intellectual property layout, and for projects that may involve the export of technology or products, we conduct international patent planning in advance. For different types of intellectual property, we adopt a categorized protection strategy to comprehensively strengthen the guiding role of the Company's intellectual property strategy.

市場開拓與合作

報告期內,中國同輻於核技術應用領域取 得顯著突破,進一步鞏固了市場地位並擴 大了國際影響力。在醫療設備業務方面, 國產伽瑪刀成功上市銷售3台,展現了產 品在市場上的高度認可;Tomo C設備年 內銷售量達22台,持續領跑國內市場。

同時,本集團持續推動國際戰略合作和品 牌交流推廣。於本年度,中國同輻與巴西 核能與能源研究所等機構簽署戰略合作協 議,為中巴核技術應用的戰略合作提供了 堅實支撐。同時,公司成功中標孟加拉國 百萬居里伽馬輻照站項目,這是中國同輻 首個海外政府機構EPC項目,標誌著公司 在國際市場的拓展邁入新階段。2024年 11月,中國同輻成功承辦國際原子能機構 (IAEA)核技術部長級會議及中國主題邊會 等活動,將核醫療與輻照應用的「中國方 案」推向全球,相關報道全球媒體傳播量 達1.7億次,顯著提升了品牌國際聲譽。 此外,公司專家積極參與亞太核協定會 議、俄羅斯金磚國家核醫學論壇、非洲和 平利用核技術會議等國際平台,分享技術 經驗與創新成果,有效提升了公司在國際 核技術領域的知名度與影響力。

中國同輻始終與行業同頻共振,攜手共進。在企業發展的歷程中,管理層始終以 身作則、率先垂範,以實際行動引領全體 員工踐行企業價值觀。每一位同輻人都以 高度的責任感與使命感,透過每一件產 品、每一次服務以及每一個細微的行為, 深刻詮釋著中國同輻的品牌管理理念。這 種自上而下的價值傳遞與實踐,不僅塑造 了企業的獨特文化,更為客戶、合作夥伴 及社會各界帶來了實質的價值與信賴。

MARKET DEVELOPMENT AND COOPERATION

During the Reporting Period, CIRC made significant breakthroughs in the field of nuclear technology applications, further consolidating its market position and expanding its international influence. In the medical equipment business, the domestically produced Gamma Knife successfully sold 3 units, demonstrating strong market recognition for the product. The sales of the TOMO-C equipment reached 22 units during the year, maintaining their leadership in the domestic market.

At the same time, the Group continued to promote international strategic cooperation and brand promotion. This year, CIRC signed a strategic cooperation agreement with the Brazilian Institute for Nuclear Energy and Energy Research, providing strong support for Sino-Brazilian strategic cooperation in nuclear technology applications. The Company also successfully won the bid for the Million Curie Gamma Irradiation Station project in Bangladesh, marking CIRC's first overseas EPC project with a government institution and marking a new phase in the Company's expansion in international markets. In November 2024, CIRC successfully hosted the International Atomic Energy Agency (IAEA) Nuclear Technology Ministerial Conference and the China-themed side events, promoting China's solutions for nuclear medicine and radiation applications globally. Related reports reached a global media reach of 170 million views, significantly enhancing the international reputation of the brand. Additionally, the Company's experts actively participated in international platforms such as the Asia-Pacific Nuclear Cooperation Meeting, the BRICS Nuclear Medicine Forum in Russia, and the African Peaceful Use of Nuclear Technology Conference, sharing technological experiences and innovations, effectively boosting the Company's prominence and influence in the international nuclear technology sector.

CIRC has always resonated with the industry, moving forward hand-in-hand with its partners. Throughout the Company's development, the management has led by example, setting the tone for all employees to practice the Company's values through actions. Every member of CIRC demonstrates the brand management philosophy with a strong sense of responsibility and mission, embodying these values in every product, service, and action, effectively interpreting the CIRC's unique culture. This top-down value transmission and practice not only shapes the Company's culture but also bring substantial value and trust to customers, partners, and society at large.

聚焦安全生產

本集團嚴格遵守涉及健康、安全事宜及補 救方法相關的法律法規, 並以此為參考制 定和完善內部管理政策體系,包括但不限 於以下相關條例及制度:

FOCUSING ON SAFE PRODUCTION

The Group strictly adheres to laws and regulations related to health, safety matters, and remedial measures, and uses these as references to formulate and improve its internal management policy system, including but not limited to the following relevant rules and regulations:

法律法規: Laws and Regulations:

《中華人民共和國產質量量法》 Product Quality Law of the People's Republic of China

《中華人民共和國安全生產法》

《中華人民共和國核安全法》 Nuclear Safety Law of the People's Republic of China

《放射性同位素與射線裝置安全和防護條例》 Regulations on Safety and Protection of Radioactive Isotopes and Radiation

內部管理條例: **Internal Management Rules:**

《安全值班人員崗位責任制》 Responsibility System for Safety Duty Personnel

《安全用電管理規定》 Regulations on the Management of Safe Electricity

《消防安全管理規定》 Regulations on the Management of Fire Safety

《建設項目安全管理部門規定》 Regulations on the Safety Management Department of **Construction Projects**

《放射性物品運輸安全管理條例》 Regulations on the Administration of Transport Safety of Radioactive Articles

《放射性藥品管理辦法》 Production Safety Law of the People's Republic of China Measures for Management of Radiopharmaceuticals

> 《放射源安全和保安行為準則》 Code of Conduct for the Safety and Security of **Radioactive Sources**

《危險化學品安全管理條例》 Regulations on the Safety Management of Hazardous Chemicals

《建設項目現場安全負責人崗位責任制》 Responsibility System for On-site Safety Officer of **Construction Projects**

《特種設備安全管理規定》 Regulations on the Safety Management of Special Equipment

《核安全與輻射防護管理規範》 Nuclear Safety and Radiation Protection Management Standards

《應急響應與風險防控預案》 Emergency Response and Risk Prevention and Control Plan

物質安全管理

原子高科及中核高通根據《中華人民共和 國藥品管理法》(2019年修訂版)有關藥物 警戒質量管理的要求,制定如下相關要求 (包括但不限於):

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MATERIAL SAFETY MANAGEMENT

The Group has always viewed safety production as the lifeline of enterprise development, integrating safety goals into all aspects of production and operations. To ensure product safety and quality, we implement strict control measures and continually improve our safety management standards. By conducting regular safety inspections and safety technology improvements, we continually strengthen the foundation of safety production. The Group has established a Safety Production Committee, which holds special meetings on safety work every quarter, analyzing safety situations and deploying related tasks. We also require all subsidiaries to strictly implement the safety production responsibility system, actively develop and improve safety management systems, ensuring the smooth operation of product safety and production activities. These measures not only protect the safety and health of employees but also lay a solid foundation for the sustainable development of the enterprise.

HTA and CNGT have formulated the following requirements in accordance with the *Drug Administration Law of the People's Republic of China (2019 Revision)* concerning drug vigilance quality management (including but not limited to):



原子高科 HTA

- 《藥品不良反應報告和監測管理 規程》
- 《藥物警戒體系管理辦法》
- The Regulations on the Management of Adverse Drug Reaction Reporting and Monitoring
- The Administrative Measures on the Pharmacovigilance System



中核高通 CNGT

- 《標識標牌管理規定》
- 《安全、環保、職業健康管理大綱》
- 《安全、環保、職業健康相關方管理 規定》
- 《安全生產標準化自評和持續改進 管理辦法》
- 《安全巡視與檢查管理規定》
- 《安全生產責任制及責任追究管理 規定》
- 《生產和服務過程管理規定》
- The Management Regulations on the Labelling
- The Management Framework for Safety, Environmental Protection and Occupational Health.
- The Management Regulations on the Related Parties of Safety, Environmental Protection and Occupational Health
- The Administrative Measures on the Standardised Self-evaluation and Continuous Improvement of Safety Production
- The Management Regulations on the Safety Inspections and Checks,
- The Management Regulations on the Safety Production Responsibility and Accountability
- The Management Regulations on the Production and Service Processes

原子高科 – 放射物質安全管理制度

HTA – Radiation Material Safety Management System

原子高科高度重視放射源與放射性物質的安全管理,制定並實施《放射源與放射性物質安全管理規定》, 要求各單位及附屬公司建立安全管理責任制,嚴格遵守放射源與放射性物質在購買、生產、銷售、回 收、貯存、轉移、進出口及運輸等方面的安全管理規定。在採購、借用、轉移、貯存及代加工放射性原 材料的活動中,必須執行統一批准制度,原子高科所屬各單位(非獨立附屬公司)需獲得主管領導批准後 方可開展相關活動。此外,原子高科及各生產單位須對生產的放射源進行逐一編碼,嚴禁銷售無編碼的 放射源,並杜絕向無法定資質的單位和個人銷售放射源、含放射源的裝置及射線裝置。在發貨前,還需 確保所有銷售產品已通過客戶所在地區環保部門的審批,全方位強化對放射源和放射性物質的監管,確 保安全管理的全面落實。

HTA places great importance on the safety management of radiation sources and radioactive materials. It has developed and implemented the *Regulations on the Safety Management of Radioactive Sources and Radioactive Substances*, requiring all units and subsidiaries to establish a safety management responsibility system. The regulations strictly adhere to safety management rules regarding the purchasing, production, sales, recycling, storage, transfer, import/export, and transportation of radiation sources and radioactive raw materials, a unified approval system must be followed. Units under HTA (non-independent subsidiaries) must obtain approval from the responsible leader before undertaking relevant activities. Additionally, HTA and all production units must assign a unique code to each produced radiation sources or devices containing radiation sources to unauthorized units or individuals is forbidden. Before shipment, all products for sale must be approved by the environmental protection departments in the customer's region. This system ensures comprehensive regulation of radiation sources and radioactive materials, ensuring the full implementation of safety management.

中核高通 - 安全生產委員會設立

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CNNCHE – Establishment of Safety Production Committee

中核高通在《安全管理大綱》中明確了成員單位安全生產委員會的職責定位,指出其作為安全生產和安全 管理工作的領導機構,負責對重大安全事宜進行決策。《安全管理大綱》還規範了輻射安全、一般安全、 運輸安全等管理內容,並將安全教育培訓、安全績效考核及職業健康管理納入其中,全面構建安全管理 體系。

In its *Safety Management Protocol*, CNNCHE defines the role of the Safety Production Committee in member units, positioning it as the leadership body responsible for decision-making on major safety issues. The *Safety Management Protocol* also regulates radiation safety, general safety, transportation safety, and incorporates safety education and training, safety performance assessments, and occupational health management into the framework, building a comprehensive safety management system.

應急管理

本集團致力於提升突發應急事故的應對能 力,持續完善管理機制,強化安全應急準 備與響應能力。我們設立了專門的應急組 織機構,並制定了《生產安全應急管理辦 法》《生產安全事故綜合應急預案》《生產 安全事故報告和調查辦法》及《中國同輻 股份有限公司突發環境事件專項應急預 案》等工作方案,以確保應急管理的有序 進行。

此外,我們健全了應急管理制度,制定了 三項專項應急預案,包括《輻射事故應急 預案》《工業安全事故應急預案》和《突發 環境事件應急預案》,全面涵蓋各類潛在 風險場景,為突發事件的快速響應與有效 處置提供堅實保障。這些舉措進一步提升 了本集團的應急管理水準,確保企業運營 的安全與穩定。

EMERGENCY MANAGEMENT

The Group is committed to enhancing its emergency response capabilities and continuously improving its management mechanisms, strengthening safety emergency preparedness and response capabilities. We have established a dedicated emergency organization and formulated work plans such as the Safety Emergency Management Measures, Comprehensive Emergency Plan for Production Safety Incidents, Production Safety Accident Reporting and Investigation Measures, and CIRC Emergency Plan for Sudden Environmental Events, to ensure that emergency management proceeds in an orderly manner.

In addition, we have improved our emergency management system and developed three special emergency plans, including the *Radiation Accident Emergency Plan, Industrial Safety Accident Emergency Plan,* and *Emergency Plan for Sudden Environmental Events,* covering all potential risk scenarios and providing solid support for rapid response and effective handling of emergencies. These measures further enhance the Group's emergency management capabilities, ensuring the safety and stability of business operations.

注重產品質量

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產品質量體系管理

本集團始終堅持以「規範經營,安全至 上,品牌基石,一次成功」的質量方針為 核心,全面指導生產經營活動。中國同輻 及其下屬單位嚴格遵循ISO 9001標準, 並已成功通過ISO 9001質量管理體系認 證,確保產品與服務的質量達到國際標 準,為企業的可持續發展奠定堅實基礎。

FOCUSING ON PRODUCT QUALITY

PRODUCT QUALITY SYSTEM MANAGEMENT

The Group has always adhered to the quality policy of "standardized operation, safety first, brand foundation, and success at first attempt," guiding all production and operational activities. CIRC and its subsidiaries strictly follow the ISO 9001 standards and have successfully passed the ISO 9001 quality management system certification, ensuring that the quality of products and services meets international standards and providing a solid foundation for the sustainable development of the enterprise.



質量管理體系認證證書 Quality Management System Certificates

本集團始終將質量管理作為核心工作,持續推動質量體系的優化與創新,並通過常態化的質量提升活動,強化全員質量意識 與實踐能力。每年定期組織質量管理(QC) 小組活動及質量月活動,進一步提升質量 管理水平。為系統化指導質量管理工作, 我們建立了完善的制度體系,編製了包括 《質量管理規定》《質量事故(事件)管理辦 法》《質量監督管理辦法》《質量信息管理 辦法》《質量培訓管理辦法》及《質量管理 小組活動管理辦法》等一系列文件,確保 質量管理工作規範化、標準化。

集團質量管理小組始終堅持高質量、高標 準的監督與執行,在質量管理領域取得了 顯著成效。2024年度,中國同輻在質量 管理方面屢獲殊榮:所屬中核海得威員工 榮獲中核集團「質量先進個人」稱號;所 屬單位原子高科QC小組活動斬獲中核集 團一等獎及央企QC大賽二等獎;所屬單 位安徽養和醫療器械設備有限公司QC小 組榮獲中質協QC小組最高級別「示範級」 獎項;所屬單位原子高科首次獲得中質協 全國質量信得過班組「五星級」稱號。這 些成績充分彰顯了本集團在質量管理領域 的卓越表現與行業領先地位。 The Group always considers quality management as a core task, continuously promoting the optimization and innovation of the quality system. Through regular quality improvement activities, we strengthen the awareness and practical ability of all employees regarding quality. We organize quality management (QC) team activities and quality monthly activities regularly every year, further improving the level of quality management. To systematically guide quality management work, we have established a complete set of institutional systems, including documents such as *Quality Management Regulations, Quality Accident (Incident) Management Measures, Quality Information Management Measures, Quality Training Management Measures,* and *Quality Management Group Activities Management Measures,* ensuring that quality management work is standardized and regulated.

The Group's quality management team consistently upholds high standards of supervision and execution, achieving remarkable results in the field of quality management. In 2024, CIRC received numerous accolades for its quality management efforts: employees of Headway were awarded the title of "Advanced Individual in Quality" by CNNC; the QC team at HTA won the first prize at CNNC's QC competition and the second prize at the state-owned enterprises QC competition; the QC team at Anhui Yanghe Medical Equipment Co., Ltd. won the highest-level "Demonstration" award at the China Quality Association's QC competition; HTA received the "Five-Star" award for being a National Quality Trusted Team from the China Quality Association. These achievements fully demonstrate the Group's excellence and industry leadership in quality management.





QC獲獎證書 QC Award Certificates

產品售後及召回

售後保障是質量管理的重要環節。我們 要求生產單位建立健全售(修)後服務機 制,及時處理產品交付後的質量問題。 各單位嚴格遵循《藥品召回管理辦法》和 《醫療器械召回管理辦法》等法規,制定 了《藥品召回管理規程》《產品召回控制程 序》《放射性藥品召回管理程序》及《產品 退貨與召回管理規程》等文件,明確召回 的定義、適用範圍、部門職責及工作程 序。同時,我們配套了藥品安全隱患調查 評估記錄、醫療器械調查評估表、召回事 件報告表等文件,確保召回工作高效執 行。

為保障客戶利益與企業信譽,我們嚴格執 行質量檢定制度,涵蓋進貨檢驗、工序檢 驗及最終產品檢驗三大階段。不合格產品 嚴禁放行,並依據產品質量標準及檢驗規 程,對原輔料、半成品及成品進行全面監 測,確保產品質量符合要求,為客戶提供 安全可靠的產品與服務。

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PRODUCT AFTER-SALES AND RECALL

After-sales support is a critical component of quality management. We require production units to establish and improve after-sales (and after-repair) service mechanisms to promptly address quality issues after product delivery. All units strictly comply with regulations such as the Administrative Measures for Drug Recalls and the Administrative Measures for Medical Device Recalls, and have developed documents including the Administrative Procedures for Drug Recalls, the Procedures for Product Recalls Control, the Procedures for Radiopharmaceutical Recall, and the Administrative Procedures for Product Returns and Recalls, clearly defining recall criteria, applicable scope, departmental responsibilities, and operational procedures. Additionally, we have implemented records for investigating and assessing drug safety hazards, medical device investigation and assessment forms, and recall event report forms to ensure efficient execution of recall operations.

To protect customer interests and the corporate reputation, we strictly adhere to quality inspection systems, covering three major stages: incoming inspection, process inspection, and final product inspection. Defective products are strictly prohibited from being released, and raw materials, semi-finished products, and finished products are comprehensively monitored according to product quality standards and inspection procedures to ensure product quality meets the required standards, providing customers with safe and reliable products and services.

對於不合格品的控制與管理,本集團在 《質量手冊》中明確了相關工作流程。有關 不合格品的處置流程如下: For the control and management of non-conforming products, the Group has outlined the relevant procedures in the *Quality Management System*. The disposal process for non-conforming products is as follows:



對於不合格品的最終處置,我們採取多種 方法以確保產品質量與客戶權益得到保 障。首先,對於未造成實質影響的一般不 合格品,可通過讓步接受的方式處理;其 次,對於無法使用或存在潛在風險的產 品,將進行報廢處理,避免其流入市場。 此外,我們會與用戶協商解決方案,必要 時提供退換產品服務,以滿足客戶需求。 對於可能對客戶造成風險的產品,我們會 及時通知客戶停用,並啟動追回程序,確 保產品安全與企業信譽不受損害。這些處 置方法體現了我們對產品質量的嚴格把控 以及對客戶利益的高度重視。

中國同輻質量管理部門對所屬單位執行情 況開展了監督檢查。於本年度,本集團未 曾接獲已售或已運送產品中因安全與健康 理由被退回的情況。 For the final disposal of non-conforming products, we use various methods to ensure product quality and protect customer rights. First, for general non-conforming products that do not cause substantial impact, they may be handled through acceptable concessions. Secondly, for products that are unusable or pose potential risks, they will be scrapped to prevent them from entering the market. Additionally, we will negotiate solutions with customers and, if necessary, provide product returns or exchanges to meet customer needs. For products that may pose risks to customers, we will promptly notify customers to cease use and initiate a recall procedure to ensure product safety and protect the corporate reputation. These disposal methods reflect our strict control over product quality and our strong commitment to customer interests.

CIRC's quality management department supervises and inspects the implementation by its subsidiaries. In the Year, the Group did not receive any instances of products being returned after sale or shipment for safety or health reasons.

優化客戶體驗

客戶溝通及意見處理

本集團的市場營銷體系採用統一管理與分 級負責的運作模式,市場開發部負責中國 同輻系統的市場宏觀管理,而各附屬公 司則具體負責其業務領域的銷售與市場 管理工作。根據《市場營銷管理辦法(試 行)》,各附屬公司需建立完善的客戶管理 制度,實現客戶檔案管理、客戶服務、意 見投訴處理、客戶回訪及滿意度調研的閉 環管理,確保客戶需求得到全面響應。

建立良好暢通的客戶溝通渠道對於提升客 戶滿意度具有重要意義,本集團持續優化 對外溝通方式。除滿意度調查外,我們亦 通過舉辦客戶交流會、組織學術推廣活動 及開展用戶走訪等形式,主動搭建與客戶 的互動平台。在這些活動中,我們不僅向 客戶介紹本集團的產品及相關業務信息, 還積極聆聽客戶的意見與建議,及時回應 客戶的諮詢與需求,讓客戶感受到專業服 務與尊重,從而增強市場競爭力。同時, 本集團高度重視客戶投訴的處理效率與效 果,定期或不定期檢查各部門對投訴事件 的處理情況,並將產品及服務投訴的處理 結果與落實情況納入相關人員的績效考核 指標。在報告期內,本集團未接獲有關產 品及服務的投訴個案。

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OPTIMIZING CUSTOMER EXPERIENCE

CUSTOMER COMMUNICATION AND FEEDBACK HANDLING

The Group's marketing system adopts a unified management and hierarchical responsibility operation model. The Market Development Department is responsible for the macro management of the CIRC system, while each subsidiary is specifically responsible for sales and market management in their respective business areas. According to the *Marketing Management Measures (Trial)*, each subsidiary must establish a comprehensive customer management system to achieve closed-loop management of customer profile management, customer service, complaint handling, customer follow-up, and satisfaction surveys, ensuring that customer needs are fully addressed.

Establishing smooth and effective customer communication channels is crucial for improving customer satisfaction. The Group continues to optimize its external communication methods. In addition to satisfaction surveys, we also organize customer communication meetings, academic promotion activities, and user visits to proactively build an interactive platform with customers. In these activities, we not only introduce the Group's products and related business information but also actively listen to customer feedback and suggestions, promptly respond to inquiries and needs, and ensure customers experience professional service and respect. This, in turn, enhances our market competitiveness. Moreover, the Group places great importance on the efficiency and effectiveness of handling customer complaints. We regularly or irregularly inspect how departments address complaint cases and incorporate the handling results of product and service complaints into the performance evaluation criteria for relevant personnel. During the Reporting Period, the Group did not receive any complaints regarding products and services.



應對產品及服務投訴的流程 Process for Responding to Product and Service Complaints

本集團對藥品投訴管理設有專門流程,並 制定了具體規範。例如,原子高科依據藥 品生產質量管理規範(GMP)中的《投訴管 理規程》,要求藥品質量投訴的調查與處 理必須由專人負責,並配備足夠的輔助團 隊,以確保投訴得到專業且高效的回應。

在放射性藥品質量投訴處理方面,我們採 取更為嚴謹的措施。以原子高科為例,對 於一般投訴,中國同輻放射性藥品營銷中 心在收到投訴後,會立即通知原子高科相 關事業部,事業部需在24小時內完成處 理並回饋結果;對於重大投訴,則實行提 級管理,整體處理流程控制在5個工作日 內。具體流程包括:放射性藥品營銷中心 第一時間通知原子高科整體營銷服務部, 隨後由整體營銷服務部向原子高科質量部 回饋,最終由相關事業部向客戶回饋處理 結果。這一流程確保了投訴的及時處理與 潛在風險的有效控制,從而優化客戶體驗 並維護企業聲譽。 The Group has established a dedicated process for managing drug complaints and has formulated specific guidelines. For example, HTA, in accordance with the Good Manufacturing Practice (GMP) for pharmaceuticals, has developed the *Complaint Management Regulations*, which require that investigations and handling of drug quality complaints be assigned to a designated person and supported by an adequate team to ensure complaints are addressed professionally and efficiently.

We have adopted more rigorous measures in handling complaints about the quality of radiopharmaceuticals. For instance, at HTA, for general complaints, the CIRC Radiopharmaceutical Marketing Center will immediately notify the relevant business unit of HTA upon receiving a complaint. The business unit is required to complete the handling and provide feedback within 24 hours. For major complaints, an escalated management process is followed, with the overall handling process completed within 5 working days. The specific process includes: the Radiopharmaceutical Marketing Center promptly notifying HTA's General Marketing Services Department, which then provides feedback to HTA's Quality Department, and finally, the relevant business unit responds to the customer with the handling results. This process ensures timely handling of complaints and effective control of potential risks, thereby optimizing the customer experience and maintaining corporate reputation.

客戶滿意度管理

本集團持續強化客戶滿意度管理,嚴格依 據中國同輻《客戶滿意度管理辦法》監督 各附屬公司整改方案落實進度,並通過壓 實部門責任、完善響應機制提升服務質 量。2024年重點推進整改提升工作,對 旗下近五千家客戶開展覆蓋品牌、產品質 量、服務及交付等全業務鏈的滿意度調 查,以實地拜訪及座談形式深入收集反饋 意見,形成「滿意度提升督辦清單」,針對 性優化客戶體驗,確保整改措施轉化為實 際服務效能。

客戶隱私管理

我們遵守《中華人民共和國個人信息保護 法》,秉持「業務工作誰主管,保密工作誰 負責」及「業務工作開展到哪裡,保密工 作就落實到哪裡」的原則,全面推動隱私 保護工作的落實。中國同輻保密辦公室作 為日常辦事機構,負責組織商業秘密保護 教育培訓、開展保密檢查、強化保密技術 防護及處理洩密事件等工作。對於洩密事 件,我們採取零容忍態度,若因工作失誤 或管理不當導致國家秘密或公司商業秘密 洩露,將對相關責任人進行行政處分或追 究法律責任。

CUSTOMER SATISFACTION MANAGEMENT

The Group continuously strengthens customer satisfaction management and strictly supervises the implementation progress of the corrective actions of its subsidiaries in accordance with CIRC's *Customer Satisfaction Management Measures*. Service quality is enhanced by holding departments accountable and improving response mechanisms. In 2024, the Group focused on promoting corrective improvements and conducted satisfaction surveys covering nearly 5,000 customers, including the full business chain of brand, product quality, services, and delivery. Feedback was collected through field visits and discussion meetings, forming a "Satisfaction Improvement Supervision List". Targeted improvements to customer experience were made, ensuring that corrective measures translate into practical service effectiveness.

CUSTOMER PRIVACY MANAGEMENT

We comply with the *Personal Information Protection Law of the People's Republic of China* and follow the principles of "the person in charge of business work is responsible for confidentiality work" and "wherever business work is carried out, confidentiality work must be implemented." We fully promote the implementation of privacy protection. The CIRC Confidentiality Office, as the daily office agency, is responsible for organizing business secret protection education and training, conducting confidentiality checks, enhancing technical protection for confidentiality, and handling confidentiality breaches. For any breach of confidentiality, we take a zero-tolerance approach. If national secrets or the Company's business secrets are leaked due to work errors or improper management, we will impose administrative penalties or pursue legal responsibility for the responsible persons.

員工關愛共榮

保障員工權益

人才資源是推動企業可持續經營的核心動 力,本集團始終將人才培育與發展列為首 要策略,致力構建支持員工全面成長的組 織文化與專業環境。我們透過多元招募管 道、完善培訓機制與人才留任策略,持續 打造高績效團隊,為企業創造長期價值。

在人力資源管理方面,本集團嚴格遵循 《中華人民共和國勞動法》《中華人民共和 國勞動合同法》《中華人民共和國社會保 險法》及《中華人民共和國未成年人保護 法》等相關法規,涵蓋薪酬福利、招聘晉 升、工時休假、平等機會等各項勞動權益 保障。為落實公平公正的用人理念,我們 積極推動多元化與反歧視政策,並建立完 善的內部制度與溝通機制,確保員工各項 合法權益得到充分維護。

員工僱傭

為提升招聘與錄用流程的專業性與公正 性,本集團依據《員工招聘管理辦法》,全 面落實「公開、平等、競爭、擇優」及「德 才兼備、量才聘用」的核心理念,確保人 員與崗位高度匹配,並嚴格禁止任何形式 的歧視行為。無論性別、年齡、種族或身 體條件,均不作為招聘與晉升的評判標 準,致力營造公平競爭的職場環境。

EMPLOYEE CARE AND SHARED PROSPERITY

EMPLOYEE RIGHTS PROTECTION

Human resources are the core driving force for the sustainable operation of the Company. The Group has always prioritized talent cultivation and development as its primary strategy, aiming to create an organizational culture and professional environment that supports employees' comprehensive growth. Through diverse recruitment channels, improved training systems, and talent retention strategies, we continue to build high-performance teams that generate long-term value for the Company.

In human resource management, the Group strictly complies with laws and regulations such as the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Social Insurance Law of the People's Republic of China, and the Law of the People's Republic of China on the Protection of Minors. These laws cover labor rights protection, including compensation and benefits, recruitment and promotion, working hours and holidays, and equal opportunities. To implement a fair and just employment philosophy, we actively promote diversity and anti-discrimination policies, establishing comprehensive internal systems and communication mechanisms to ensure that employees' legal rights are fully protected.

EMPLOYEE EMPLOYMENT

To enhance the professionalism and fairness of the recruitment and hiring process, the Group implements the *Employee Recruitment Management Measures*, adhering to the core principles of "openness, equality, competition, and selection based on merit" and "integrity and capability in hiring." This ensures a high match between personnel and positions, and strictly prohibits any form of discrimination. Gender, age, race, or physical condition are not considered as criteria for recruitment or promotion, aiming to create a fair and competitive work environment.

此外,我們透過社會招聘、校園招聘、內 部推薦及人才獵取等多種管道廣納賢才, 優化人力資源配置,推動企業持續發展。 我們恪守市場導向用人方針,於2024年 組織開展了本部及子公司的中層管理人員 公開選聘,調整比例均超50%,有效激活 管理團隊活力。在編製範圍內,我們依據 部門缺編情況及崗位需要,按既定程序引 進本部員工。各子公司亦根據實際需求擬 定年度招聘計劃及具體管理規定,並由人 力資源部審核批准。

本集團嚴格遵守《中華人民共和國勞動 法》及《中華人民共和國勞動合同法》等相 關法規,秉持合法用工原則,制定完善的 內部用人制度,堅決杜絕童工及強制勞動 等違法行為。招聘制度明確規定應聘者須 年滿18週歲,並透過簽訂勞動合同確立 正式勞動關係。若試用期內發現不符合錄 用條件者,將依法終止僱傭關係。

為保障員工合法權益,本集團嚴格規範解 僱流程,杜絕不合理解僱行為。根據本公 司《勞動合同制度實施辦法》,我們明確了 勞動合同解除的規定、流程及經濟補償標 準,確保依法依規處理相關事宜。同時, 各附屬公司根據自身條件在符合國家各項 要求的條件下制定內部相關制度。除法 定情形(如試用期內違反國家法律法規) 外,嚴禁無故解僱員工。 In addition, we attract talent through various channels, including social recruitment, campus recruitment, internal recommendations, and headhunting, optimizing human resource allocation and promoting corporate sustainable development. We adhere to a market-oriented employment policy and, in 2024, organized the open selection of mid-level managers at the headquarters and subsidiaries, with an adjustment ratio exceeding 50%, effectively invigorating the management team. Within the staffing framework, we recruit employees for the headquarters based on department vacancies and job needs following established procedures. Subsidiaries also develop annual recruitment plans and specific management regulations based on actual needs, which are reviewed and approved by the human resources department.

The Group strictly adheres to laws such as the Labor Law of the People's Republic of China and the Labor Contract Law of the People's Republic of China, following legal employment principles, and has developed a comprehensive internal employment system to resolutely eliminate child labor and forced labor. The recruitment system clearly stipulates that applicants must be at least 18 years old and that formal labor relationships are established through labor contracts. If an employee is found to not meet hiring conditions during the probationary period, the employment relationship will be legally terminated.

To protect employees' legal rights, the Group strictly regulates the dismissal process to prevent unreasonable dismissals. According to the *Labor Contract System Implementation Measures*, we have defined the rules, procedures, and economic compensation standards for the termination of labor contracts to ensure legal and regulatory compliance. At the same time, subsidiaries establish their own internal regulations, provided they comply with national requirements. Except in statutory cases (such as violation of national laws and regulations during the probation period), unjustified dismissals are strictly prohibited.

報告期內,本集團在人力資源管理領域保 持優異表現,未發生任何涉及招聘解僱、 薪酬福利、工時休假、平等機會等方面的 違規事件,亦無涉及非法童工或強制勞動 的重大投訴或違規情況。截至本年度末, 集團員工總數達3,367人(2023年:3,105 人),具體人力資源數據詳見下表。 During the Reporting Period, the Group maintained excellent performance in human resource management, with no incidents of violations related to recruitment and dismissal, compensation and benefits, working hours and holidays, or equal opportunities, and no major complaints or violations regarding child labor or forced labor. By the end of this year, the Group had 3,367 employees (2023: 3,105 employees), with specific human resource data provided in the table below.

		2024 年	2023年 2023
僱員人數	Number of Employees	2024	
	By Gender		
男性	Male	2,331	2,135
女性	Female	1,036	970
按年齡劃分	By Age		
20歲-30歲	20-30 years old	919	905
31歲-40歲	31-40 years old	1,397	1,310
41歲-50歲	41-50 years old	739	645
51歲-60歲	51-60 years old	312	245
按僱傭類型劃分	By Employment Type		
領導層	Leadership	8	8
中層	Middle level	95	100
普通員工	General staff	3,264	2,997
按地區劃分	By Geographical Region		
北京	Beijing	963	842
廣東	Guangdong	391	402
四川	Sichuan	309	236
江蘇	Jiangsu	238	132
上海	Shanghai	110	100
天津	Tianjin	200	87
安徽	Anhui	256	234
浙江	Zhejiang	69	79
吉林	Jilin	107	24
海南	Hainan	23	21
其他12	Others ¹²	701	948

12 在按地區劃分的僱員人數,其他地區包 12 括遼寧、內蒙古、陝西、湖南、湖北、 重慶等。 The number of employees in "others" region includes Liaoning, Inner Mongolia, Shanxi, Hunan, Hubei, Chongqing, etc.

截至本年度末,整體員工流失比率為 7.6%,具體數據請參見下表。 As at the end of the Year, the overall employee turnover rate was 7.6%. For details, please refer to the table below.

		員工流失人數		
		Number of	員工流失率	
		Employee	Employee	
僱員流失數據	Employee Turnover Data	Turnover	Turnover Rate	
按性別劃分	By Age			
男性	Male	178	7.6%	
女性	Female	79	7.6%	
按年齡劃分	By Age			
20歲-30歲	20-30 years old	102	11.1%	
31歲-40歲	31-40 years old	89	6.4%	
41歲-50歲	41-50 years old	40	5.4%	
51歲-60歲	51-60 years old	26	8.3%	
按地區劃分	By Geographical Region			
北京	Beijing	41	4.3%	
廣東	Guangdong	32	8.2%	
四川	Sichuan	13	4.2%	
江蘇	Jiangsu	4	1.7%	
上海	Shanghai	6	5.5%	
天津	Tianjin	35	17.5%	
安徽	Anhui	25	9.8%	
浙江	Zhejiang	2	2.9%	
吉林	Jilin	0	0.0%	
海南	Hainan	0	0.0%	
其他	Others	99	14.1%	

民主管理

中國同輻持續完善民主管理機制,建立健 全職工參與治理的常態化管道。職工大會 作為職工行使民主管理權力的機構。依規 定,職工大會每年至少召開一次,其決議 事項遵循少數服從多數原則,須經全體應 出席代表過半數同意方得通過。職工大會 依法行使多項民主職權,包括但不限於: 聽取發展規劃、年度生產經營管理狀況、 重大投資與技術改造、財務預決算、業務 招待費使用等專項報告;審議涉及職工切 身利益的薪酬福利改革、勞動保障、勞動 紀律等規章制度或重大事項,並提出意見 與建議。

此外,本公司透過工會組織強化民主管理 職能,依法妥善處理勞動糾紛等議題,維 護職工合法權益,促進勞資關係和諧發 展。中國同輻依據《勞動合同管理辦法》 及《中華人民共和國勞動法》設立勞動爭 議調解委員會。若集團違反勞動相關法規 或勞動合同,工會有權提出意見或要求重 新處理;職工申請仲裁或提起訴訟時,工 會須依法提供支持與協助。因履行勞動合 同引發的爭議,當事人可向調解委員會申 請調解,達成協議後應履行;調解未果或 當事人直接選擇仲裁的,須於爭議發生之 日起一年內向所在區勞動爭議仲裁委員會 提交書面申請。對仲裁裁決不服者,可向 法院提起訴訟;若一方未在法定期限內起 訴且拒絕履行裁決,另一方可申請法院強 制執行。通過上述對勞動爭議的管理及處 理措施,中國同輻確保員工及集團雙方利 益得到平等保障。

DEMOCRATIC MANAGEMENT

CIRC continues to improve the democratic management system, establishing and enhancing regular channels for employee participation in governance. The employee assembly serves as the institution through which employees exercise their democratic management rights. According to the regulations, the employee assembly is held at least once a year, and decisions are made based on the principle of majority rule, requiring the agreement of more than half of the representatives present to pass. The employee assembly legally exercises several democratic powers, including but not limited to: listening to and reviewing special reports from the Company's main executives on company development plans, annual production and operational management, major investments and technological renovations, financial budgets, business entertainment expenses, etc.; reviewing rules and major issues involving employees' personal interests, such as salary and welfare reforms, labor protection, and labor discipline, and providing opinions and suggestions.

Furthermore, the Company strengthens democratic management functions through the union, legally addressing labor disputes and other issues, safeguarding employees' legal rights, and promoting harmonious labor relations. CIRC has established a labor dispute mediation committee in accordance with the Labor Contract Management Measures and the Labor Law of the People's Republic of China. If the Group violates labor-related laws or labor contracts, the union has the right to propose opinions or request the issue to be reconsidered. When employees apply for arbitration or initiate litigation, the union must provide legal support and assistance. Disputes arising from the performance of labor contracts may be submitted to the mediation committee for mediation, and once an agreement is reached, it must be executed. If mediation fails or if the party chooses arbitration directly, the application for arbitration must be submitted to the local labor dispute arbitration committee within one year of the dispute. If a party disagrees with the arbitration decision, they may file a lawsuit in court; if one party fails to file within the statutory period and refuses to comply with the decision, the other party may apply for compulsory enforcement by the court. Through these management and handling measures for labor disputes, CIRC ensures that both employees' and the Group's interests are equally protected.

薪酬管理

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中國同輻的薪酬政策旨在激勵及挽留優秀 員工,以實現本集團的長期企業目標及宗 旨。本集團的僱員薪酬政策乃經考慮行業 的整體薪資狀況及僱員績效等因素予以釐 定。管理層定期檢討本集團的僱員薪酬政 策及安排,人力資源部每年依據公司整體 預算及集團工資總額要求,制定下一年度 薪酬總額計劃。

薪酬分配基於公司效益、崗位價值、員工 績效及能力素質,並參考當地平均工資、 最低工資標準、物價水平及勞動力市場狀 況等因素。薪酬體系以崗位績效工資制為 主,協議工資制為輔。公司將崗位劃分為 9個職級,包括公司領導、總經理助理、 副總師、部門總經理、部門副總經理、高 級主管、主管、職員及文員,並根據職級 調整薪酬。此外,集團實施《工資總額管 理辦法》及《職工福利費管理辦法》,完善 薪酬制度體系,綜合考量行業薪資水平及 員工績效等因素,確保薪酬分配的公平性 與競爭力。

COMPENSATION MANAGEMENT

CIRC's compensation policy aims to motivate and retain excellent employees to achieve the Group's long-term corporate goals and objectives. The Group's employee compensation policy is determined after considering the overall salary situation in the industry, employee performance, and other factors. The management regularly reviews the Group's employee compensation policy and arrangements, with the Human Resources Department formulating the salary plan for the next year based on the overall company budget and the Group's total salary requirements.

Compensation distribution is based on company performance, job value, employee performance, and capabilities, and considers factors such as local average wages, minimum wage standards, price levels, and labor market conditions. The compensation system mainly adopts a position performance-based salary system, with an additional contractual salary system. The Company divides positions into 9 levels, including company leader, assistant general manager, deputy chief engineer, department manager, deputy department manager, senior supervisor, supervisor, staff, and clerks, adjusting compensation according to the position level. Additionally, the Group implements the Salary Total Management Measures and the Employee Welfare Management Measures, improving the compensation system and comprehensively considering industry salary levels and employee performance to ensure fairness and competitiveness in compensation distribution.

加速職業發展

職業晉升通道

本集團秉持「民主、公開、競爭、擇優」 及「人崗相適、用當其時、人盡其才」的 原則,建立多元化職業發展體系,為員工 提供清晰的職涯發展路徑。中國同輻通過 系統化的職位晉升機制,確保人才選拔的 專業性與公正性,其中包含競聘晉升與績 效晉升雙軌通道,有效促進員工職業發展 與組織人才梯隊建設:

ACCELERATING CAREER DEVELOPMENT

CAREER ADVANCEMENT PATH

CIRC adheres to the principles of "democracy, openness, competition, and selection based on merit" and "fit between people and positions, using people at the right time, and making the most of their abilities" to establish a diversified career development system, offering employees a clear career development path. Through a systematic promotion mechanism, CIRC ensures the professionalism and fairness of talent selection, including dual tracks for promotion: competitive promotion and performance-based promotion, which effectively promote employee career development and the construction of an organizational talent pipeline:

競聘晉升機制 Competitive Promotion Mechanism 嚴格遵循標準化流程,涵蓋競聘方案制定、評審工作組組建、競聘公告發佈、個人自願報名、資格條件審查及現場競聘答辯等關鍵環節,確保選拔過程的透明度與公信力。 This strictly follows standardized processes, including key steps such as the formulation of the competitive promotion plan, the formation of review teams, the publication of job vacancies, voluntary applications, qualification checks, and on-site interviews, ensuring transparency and credibility in the selection process.

員工培訓體系

中國同輻始終致力於為員工營造公平、和 諸且充滿發展潛力的工作環境。通過制定 《教育培訓管理辦法》,我們進一步完善了 員工管理政策與培訓發展計劃。在中國同 輻黨委的領導下,本集團人力資源部負責 統籌幹部職工的教育培訓工作,並由本部 各部門及相關人員分工協作,共同推進教 育培訓體系的建設。我們為全體員工提供 高品質的培訓資源,定期舉辦部門人員專 業能力提升培訓、安全及質量培訓等系列 活動,持續提升員工的知識與技能,助力 其職業發展。

EMPLOYEE TRAINING SYSTEM

CIRC is committed to creating a fair, harmonious, and developmentally promising work environment for employees. By formulating the *Management Measures for Education and Training*, we further improve employee management policies and training development plans. Under the leadership of the CIRC Party Committee, the Human Resources Department coordinates the education and training of employees, with various departments and relevant personnel collaborating to advance the construction of the education and training system. We provide high-quality training resources to all employees, regularly organizing professional skills enhancement training, safety and quality training, and other activities to continuously improve employees' knowledge and skills, supporting their career development.

案例:中國同輻儲備幹部培訓班 (第二期) Case: CIRC Reserve Cadre Training Program (Second Session)

為全面貫徹習近平新時代中國特色社會主義思想,深入學習黨的二十屆三中全會精神,加強公司幹部人 才梯隊建設和年輕幹部培養工作,11月11日,由中國同輻人力資源部主辦,浙江大學承辦的中國同輻儲 備幹部培訓班(第二期)在浙江杭州舉辦,來自中國同輻本部及成員單位的46名學員參加本次培訓。本次 培訓為期5天,採用課程講授、沙盤演練、對標交流、集中研討等教學方式,邀請了浙江省委黨校、浙江 大學教授和行業專家進行授課。

To fully implement Xi Jinping's thought on socialism with Chinese characteristics for the New Era and to deeply study the spirit of the 20th National Congress of the Communist Party of China, strengthen the Company's cadre talent team and young cadre training, the second session of the CIRC Reserve Cadre Training Program was held in Hangzhou, Zhejiang, on November 11. Organized by CIRC's Human Resources Department and hosted by Zhejiang University, 46 trainees from CIRC headquarters and its member units participated. The five-day training included lectures, simulation exercises, benchmarking exchanges, and group discussions, with professors from Zhejiang Provincial Party School, Zhejiang University, and industry experts invited to teach.



中國同輻儲備幹部培訓班合影 Group Photo of CIRC Reserve Cadre Training Program

此外,本集團充分利用中國同輻線上學習 平台,為員工提供安全、便捷的學習與工 作支持。通過線上平台及多元化的培訓方 式,我們逐步建立了新員工培訓課程和精 實管理課程體系,推動企業知識的積累與 管理水平的提升。同時,我們開設了「溝 通力」通用課程及知識分享專欄,定期向 員工推薦優質導師演講與書籍,進一步豐 富學習資源。

本年度,本集團受訓員工人數為3,367人 (員工培訓覆蓋率100%),具體培訓數據 請參見下表。 Additionally, the Group makes full use of the CIRC online learning platform to provide employees with safe and convenient learning and work support. Through the online platform and various training methods, we have gradually established training programs for new employees and lean management courses, fostering the accumulation of enterprise knowledge and improvement of management standards. We also offer general courses such as "Communication Skills" and a knowledge-sharing column, regularly recommending quality speaker sessions and books to employees, further enriching learning resources.

In the Year, the Group had 3,367 trained employees (100% training coverage). For specific training data, please refer to the table below.

		受訓僱員百分比 ¹³ Percentage of Employees Trained ¹³		受訓僱員平均時數 Average Training Hours of Employees	
		2024 年	2023年	2024年	2023年
		2024	2023	2024	2023
按性別分類	By Gender				
男性	Male	69.23%	68.76%	109	109
女性	Female	30.77%	31.24%	107	101
按員工類別分類	By Employment Type				
領導層	Leadership	0.24%	0.26%	222	220
中層	Middle level	2.82%	3.22%	110	110
普通員工	General staff	96.94%	96.52%	108	103

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¹³員工培訓百分比的計算方法為:該類別 受訓員工/受訓員工總人數*100%。 The calculation method of the percentage of employees trained is: the number of employees trained in the category/total number of employees trained* 100%.

重視員工關懷

員工多元福利

本集團始終關注員工福祉,嚴格遵守《中 華人民共和國社會保險法》及相關地方性 法規,全面實施退休福利計劃、醫療及工 傷保險計劃、住房公積金計劃等,為員工 提供全方位保障。我們持續優化福利體 系,涵蓋多種補助項目,包括但不限於:

職工體檢費 Staff medical examination fees

防暑降溫費 Heat-proof and cooling fees

職工食堂經費補貼 Staff canteen subsidies

獨生子女費 One-child fee

嬰幼兒補貼 Subsidies for infants

計劃生育獎勵 Family Planning Awards

職工異地安家費 Off-site safety expenses for employees

職工探親假路費 Employee leave pay

EMPLOYEE WELFARE FOCUS

DIVERSE EMPLOYEE BENEFITS

The Group consistently prioritizes employee welfare, strictly adhering to the *Social Insurance Law of the People's Republic of China* and relevant local regulations. We comprehensively implement retirement benefit plans, medical and work injury insurance plans, housing provident fund plans, and more, providing full protection for our employees. We continue to optimize the benefits system, which covers various allowances, including but not limited to:

> 供暖費補貼 Heating subsidies

職工困難補助 Subsidies for employees' difficulties

遺屬補貼 Relay subsidies

喪葬補助費 Funeral allowance

喪葬慰問 Funeral condolences

職工子女醫藥費補貼 Medical subsidies for employees' children

職工退休慰問 Staff retirement visit

離退休人員統籌外費用 Off-balance-office expenses for retirees

我們亦注重為退休人士提供長期保障。除 政府強制性基本退休金及醫療計劃外,本 集團亦向退休人員、當期退休人員及若干 合資格在職人員提供定額退休福利(「該計 劃」),於2024年12月31日該計劃涵蓋本 集團僱員的25.74%。該計劃乃由本集團 管理並由本集團營運資金撥資。根據該計 劃,合資格退休人員及/或僱員有權享 受固定補充退休後養老金福利、固定身故 撫卹金及補充退休後醫療福利。

同時,本集團持續落實員工關懷機制, 定期開展節日探訪與慰問活動。2024年 度,中國同輻領導班子分別帶隊走訪慰問 老黨員、困難職工家庭及科技工作者代 表,傳達中國同輻的關懷與溫暖,並致以 誠摯的新春祝福。 We also focus on providing long-term security for retirees. In addition to the government-mandated basic pension and medical plans, the Group also offers a fixed retirement benefit plan ("the Plan") to retirees, current retirees, and certain eligible employees. As of December 31, 2024, the Plan covered 25.74% of the Group's employees. The Plan is managed by the Group and funded through the Group's operating funds. According to the Plan, eligible retirees and/or employees are entitled to fixed supplementary post-retirement pension benefits, fixed death benefits, and supplementary post-retirement medical benefits.

At the same time, the Group continues to implement employee care mechanisms, regularly conducting holiday visits and consolation activities. In 2024, the CIRC leadership teams led delegations to visit elderly party members, families of employees in difficulty, and representatives of scientific and technological workers, conveying CIRC's care and warmth, and extending sincere New Year greetings.

案例:慰問離休幹部 Case: Visiting Retired Cadres

2024年2月1日,中國同輻副總經理王國清代表公司開展春節慰問活動,專程走訪離休幹部徐乃欣同志。 向徐老及其家屬轉達公司的誠摯問候和新春祝福,體現集團對離休幹部的關懷與重視。

On February 1, 2024, CIRC's Deputy General Manager Wang Guoqing visited retired cadre Xu Naixin on behalf of the Company for a New Year's visit. Wang conveyed the Company's sincere greetings and New Year wishes to Xu and her family, demonstrating the Group's care and respect for retired cadres.



走訪慰問離休幹部 Visiting Retired Cadres

案例:慰問困難職工

Case: Visiting Employees in Difficult Situations

2024年1月22日,值新春佳節來臨之際,中國同輻副總經理黃立赴中核海南海原開發有限公司,親切慰問困難職工,傳達公司的關懷與新春祝福。

On January 22, 2024, just before the Chinese New Year, CIRC's Deputy General Manager Huang Li visited employees in difficult situations at China Nuclear Hainan Haiyuan Development Co., Ltd., conveying the Company's care and New Year wishes.



慰問困難職工及其家屬 Visiting Employees in Difficult Situations and Their Families

案例:慰問科技工作者 Case: Visiting Scientific and Technical Workers

2024年2月2日,中國同輻總經理、黨委副書記許紅超赴中核海得威開展春節慰問活動,親切看望科技工作者代表。高度評價科技團隊在科研創新方面取得的顯著成效,並向全體科技工作者送上新春佳節的美好祝願,充分展現集團對科技人才隊伍建設的戰略重視與人文關懷。

On February 2, 2024, CIRC's General Manager and Party Committee Deputy Secretary Xu Hongchao visited Headway to carry out a New Year's visit, personally greeting representatives of scientific and technological workers. He highly praised the team's achievements in research and innovation and sent New Year wishes to all technological workers, highlighting the Group's strategic focus on building a talent pool in science and technology and its humanistic care.



慰問科技工作者 Visiting Scientific and Technical Workers

中國同輻將員工訴求納入管理實踐,通過 年度滿意度調研(本年度共436名員工參 與,佔員工總人數12.79%)發現,69.5% 受訪員工(303人)建議增設觀影、觀劇等 文娛類集體活動。為落實反饋,公司工會 於2024年2月8日舉辦「慶祝中國核工業 創建70週年」主題系列活動。活動強化團 隊凝聚力,參與者普遍反饋將以軍人拼搏 精神為榜樣,深化理想信念與崗位實踐的 結合,助推企業使命踐行與創新發展。

CIRC integrates employee feedback into management practices. Through an annual satisfaction survey (with 436 employees participating this year, representing 12.79% of the total workforce), we found that 69.5% of respondents (303 employees) suggested adding group cultural activities such as movie and theater viewings. In response to this feedback, the Company's labor union organized a series of activities on February 8, 2024, to celebrate the 70th anniversary of China's nuclear industry. The activities strengthened team cohesion, and participants generally reported being inspired by the spirit of perseverance exemplified by soldiers, deepening the integration of ideals with job practice, and contributing to the corporate mission and innovative development.

To further standardize work time management, the Group implements a standard working hour system as outlined in the Staff Attendance Management Regulations, with 8-hour workdays and 40-hour workweeks, ensuring 2 days off per week, in full compliance with national statutory holidays. Employees working under special working time systems are managed in accordance with the Ministry of Human Resources and Social Security's approval for certain positions within China Nuclear Group to implement a special working time system, meeting labor law requirements. For subsidiary production positions, we implement a shift system to ensure that employees' working hours are reasonably distributed to prevent overwork. Additionally, the Group fully implements various leave systems, including work injury leave, sick leave, maternity leave, marriage and bereavement leave, and paid annual leave, fully protecting employees' rights to rest and promoting work-life balance.

員工多彩活動

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與此同時,本集團高度關注員工的身心健 康,積極舉辦節日活動、運動會及團隊建 設等多元化活動,幫助員工緩解工作壓 力,促進團隊凝聚力,營造和諧友好的工 作氛圍。

DIVERSE EMPLOYEE ACTIVITIES

At the same time, the Group places high importance on the physical and mental health of its employees, actively organizing a variety of events such as holiday activities, sports events, and team-building activities. These initiatives help employees relieve work pressure, enhance team cohesion, and create a harmonious and friendly work atmosphere.

案例:「協同齊奮進攜手創佳績」職工秋游團建活動

Case: "Collaborating for Progress, Hand-in-Hand for Achievements" Employee Autumn Outing and Team Building Activity

2024年10月18日,中國同輻在京舉辦「協同齊奮進攜手創佳績」職工秋游團建活動,本次活動是中國同 輻「紀念我國第一顆原子彈爆炸成功60週年、慶祝核工業創建70週年」系列活動之一,旨在引領廣大幹部 職工踐行「大力協同勇於登攀」精神,在親近自然、放鬆心情的同時,增強凝聚力與向心力,激發幹事創 業熱情。拓展活動中,職工們協同配合,勇創佳績,活動現場氣氛熱烈,大家通過參加拓展競技遊戲, 增強相互間的信任與默契,團隊合作精神得到充分體現。

On October 18, 2024, CIRC held the "Collaborating for Progress, Hand-in-Hand for Achievements" employee autumn outing and team-building activity in Beijing. This event was part of the series of activities to commemorate the 60th anniversary of China's first atomic bomb test success and celebrate the 70th anniversary of the nuclear industry's establishment. The event aimed to lead employees in practicing the spirit of "strong collaboration, bold ambition," enhancing cohesion and unity while enjoying nature and relaxing, and igniting enthusiasm for entrepreneurship. During the outdoor activities, employees cooperated and achieved great results, with a lively atmosphere at the event site. By participating in team-building games, employees strengthened mutual trust and understanding, fully demonstrating team cooperation spirit.



「協同齊奮進攜手創佳績」職工秋游團建活動 "Collaborating for Progress, Hand-in-Hand for Achievements" Employee Autumn Outing and Team Building Activity

案例:老同志文藝匯演活動 Case: Senior Employees' Art Performance

2024年10月11日,適逢重陽節暨全國第十二個老年節,中國同輻紀委書記常立明赴中國原子能科學研 究院文體活動中心,慰問參與中核集團「歷史的巨響——紀念我國第一顆原子彈爆炸成功60週年」文藝匯 演的中國同輻老幹部合唱團及相關兄弟單位全體成員。此次慰問活動體現集團對離退休老同志的深切關 懷,彰顯尊老敬老的優良傳統。

On October 11, 2024, coinciding with the Double Ninth Festival and the 12th National Senior Citizens' Day, CIRC's Secretary of the Discipline Inspection Commission, Chang Limin, visited the China Atomic Energy Research Institute's Cultural and Sports Activity Center to express sympathy to the members of CIRC's senior cadres choir, who participated in the "Echo of History – Commemorating the 60th Anniversary of the Successful Explosion of China's First Atomic Bomb" art performance, as well as members from other related units. This visit highlighted the Group's deep care for retired cadres and exemplified the fine tradition of respecting and honoring the elderly.



老问志又藝進演沽動 Senior Employees' Art Performance

案例:「同行奮鬥路,福耀女神節」國際勞動婦女節活動

Case: "Marching Forward Together, Celebrating Women's Festival" International Women's Day Event

為豐富女性職工業餘文化生活,展現中國同輻職工積極向上的精神風貌,本集團於2024年3月8日國際勞動婦女節舉辦「同行奮鬥路,福耀女神節」主題活動。活動設置「獻花女神」「點茶體驗」「專屬美食」「獻禮 女神」四大環節,本部及北京分公司共計60餘名女性職工參與。此次活動有效促進職工交流,提升團隊 凝聚力,彰顯集團對女性職工的重視與關懷。

To enrich the cultural life of female employees and showcase the positive and uplifting spirit of CIRC's workforce, the Group organized a themed event titled "Marching Forward Together, Celebrating Women's Festival" on March 8, 2024, International Women's Day. The event featured four main activities: "Flowers for the Goddess," "Tea Tasting Experience," "Exclusive Delicacies," and "Gifts for the Goddess." Over 60 female employees from the headquarters and the Beijing branch participated in this event. This activity effectively promoted employee interaction, enhanced team cohesion, and highlighted the group's emphasis on and care for female employees.



「同行奮鬥路, 福耀女神節」國際勞動婦女節活動 "Marching Forward Together, Celebrating Women's Festival" International Women's Day Event

打造安心工作環境

本集團視保障員工安全與身心健康為核心 責任,致力營造健康、安全且友善的工作 環境。鑒於集團業務涉及輻射科技領域, 我們將員工的身心健康與職業安全視為重 中之重,嚴格遵循相關法律法規,確保工 作環境的安全性, 並有效防範職業性危 害。我們全面遵守以下法律及規例,以保 障員工的安全與福祉:

CREATING A SAFE WORKING ENVIRONMENT

The Group considers ensuring the safety, health, and well-being of its employees as a core responsibility, committed to creating a healthy, safe, and friendly work environment. Since the Group's business involves the radiation technology field, we prioritize the physical and mental health of employees and occupational safety. We strictly adhere to relevant laws and regulations to ensure the safety of the working environment and effectively prevent occupational hazards. We fully comply with the following laws and regulations to protect the safety and well-being of our employees:

《中華人民共和國消防法》 Fire Protection Law of the People's Republic of China

《中華人民共和國安全生產法》 Production Safety Law of the People's Republic of China Regulations on the Safety Management of Radioactive

《中華人民共和國職業病防治法》 Law of the People's Republic of China on the Prevention and Control of Occupational Diseases

《放射性同位素與射線裝置安全和防護條例》

Regulations on Safety and Protection of Radioactive Isotopes and Radiation Devices

《放射工作人員職業健康管理辦法》 Administrative Measures for Occupational Health of Radiological Staff

《放射性物品運輸安全管理條例》 Material Transport

《X、γ外照射個人監測規定》 Regulations on X, y External Exposure Individual Monitoring

《電離輻射防護與輻射源安全基本標準》 Basic Standards for Radiation Protection and Radiation Source Safety

在此基礎上,為全面保障員工生命健康與 相關權益,進一步強化科研與生產過程中 的風險防控,中國同輻建立了完善的安全 責任制度及管理體系,具體包括以下制 度: On this basis, to fully ensure the life and health of employees and their related rights, and to further strengthen risk prevention and control during the research and production processes, CIRC has established a comprehensive safety responsibility system and management framework, which includes the following systems:

《安全環保管理制度》 Safety and Environmental Protection Management System

《輻射安全管理辦法》 Radiation Safety Management Measures

《工業安全管理辦法》 Industrial Safety Management Measures

《環境保護管理辦法》 Environmental Protection Management Measures

《消防安全管理辦法》 Fire Safety Management Measures

《職業衛生監督管理辦法》 Measures for the Supervision and Administration of Occupational Health

《安全生產責任制及責任追究管理規定》 Safety Production Responsibility System and Accountability Management Regulations

《安全環保風險管理辦法》 Safety and Environmental Risk Management Measures

《安全環保檢查管理辦法》 Safety and Environmental Protection Inspection Management Measures

《安全環保培訓管理辦法》 Safety and Environmental Protection Training Management Measures

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《承包商安全管理及獎懲辦法》 Contractor Safety Management and Reward and Punishment Measures

《生產安全事故報告和調查辦法》 Measures for the Reporting and Investigation of Production Safety Accidents

《生產安全應急管理辦法》 Production Safety Emergency Management Measures

《反「三違」管理辦法》 Management Measures against 'Three Violations'

《安全生產事故隱患排查治理管理規定》 Regulations on the Administration of Identification and Control of Hidden Dangers in Work Safety

《放射性工作人員營養保健費管理實施細則》 Implementation Rules for the Management of Nutrition and Health Fees for Radioactive Workers

《輻射安全事故應急預案》 Radiation Safety Accident Emergency Plan

《生產安全事故綜合應急預案》 Comprehensive Emergency Plan for Production Safety Accidents

《工業安全事故應急預案》 Emergency Plan for Industrial Safety Accidents

《突發環境事件應急預案》 Emergency Plan for Environmental Emergencies
健全EHS管理

本集團始終將員工的安全與健康置於首 位,堅持營造安全、健康的工作環境。為 此,中國同輻本部特別成立安全生產委員 會,並配備專職安全管理人員,各成員單 位亦設立完善的安全管理組織機構,對集 團內部的安全風險實施分級管控,全面推 行安全標準化建設。此外,中核海得威成 立了環保、健康及安全(EHS)委員會,透 過評估各部門及生產流程中的實際與潛在 風險,制定針對性的改善計劃與預防措 施,有效降低員工面臨的安全與健康風 險。

員工職業健康

在職業病預防與控制方面,各單位嚴格遵 循「預防為主、防治結合」的原則,從生 產源頭進行風險防控,持續優化生產工 藝、設備設施及操作技術,並建立完善的 應急處理預案與具體措施,最大限度地減 少生產環境中的污染與危害,確保員工免 受職業健康威脅。通過系統化的管理與創 新,本集團致力於為員工提供一個安全、 健康且可持續發展的工作環境。

IMPROVING EHS MANAGEMENT

The Group has always placed the safety and health of employees as a top priority, committing to creating a safe and healthy working environment. For this purpose, CIRC has established a Safety Production Committee at its headquarters and appointed dedicated safety management personnel. Each subsidiary also has established complete safety management organizations to implement hierarchical control of internal safety risks and fully promote safety standardization. Additionally, Headway has established an Environmental, Health, and Safety (EHS) Committee, which evaluates the actual and potential risks in various departments and production processes and develops targeted improvement plans and preventive measures to effectively reduce safety and health risks for employees.

Employee Occupational Health

In terms of preventing and controlling occupational diseases, all units strictly adhere to the principle of "prevention first, combining prevention with treatment." They focus on risk prevention and control from the source of production, continually optimizing production processes, equipment, facilities, and operational technologies. Additionally, they have established complete emergency response plans and specific measures to minimize pollution and hazards in the production environment, ensuring that employees are protected from occupational health risks. Through systematic management and innovation, the Group is committed to providing a safe, healthy, and sustainable working environment for its employees.

本集團嚴格依照崗位需求為放射性從業人 員配備專業的勞保與防護用品,並定期安 排職業衛生健康體檢,確保員工健康狀況 符合標準。此外,我們在工作地點為員工 配備個人劑量膠片,並定期送檢監測。本 年度內,所有員工的檢測結果均顯示正 常,未發現異常情況。在職業衛生管理方 面,我們要求存在職業危害風險的單位定 期開展工作場所及個人監測,並將職業照 射個人劑量監測結果妥善保存,同時抄送 安全環保質量部備案。

在過去連續三年的財政年度(包括本報告 期),本集團未發生任何重大安全事故或 因工作關係導致的死亡事件,因安全事故 導致的損失時數為零。報告期內,工傷損 失的工作日數14為0日。在提供安全工作 環境及保護員工免受職業危害方面,本集 團始終保持合規運作,未出現任何違規情 況。

The Group strictly provides professional labor protection and safety equipment for radioactive workers according to job requirements and regularly arranges occupational health check-ups to ensure that employees' health meets the standards. Moreover, personal films are provided at work sites, and regular monitoring tests are conducted. This year, all employee test results were normal, with no abnormalities detected. In terms of occupational health management, units with occupational hazard risks are required to conduct regular workplace and personal monitoring, and the results of personal radiation dose monitoring are properly archived and copied to the Safety, Environmental Protection, and Quality Department for record-keeping.

In the past three consecutive fiscal years (including the current reporting period), the Group has not experienced any major safety accidents or fatalities related to work. The number of work hours lost due to safety accidents was zero. During the Reporting Period, there were zero workdays lost due to work injuries. The Group has consistently complied with safety standards and ensured a safe work environment, with no violations.

14 因工傷損失的工作天只統計通過所在地 社會保險行政部門工傷認定程序的情況。

The number of working days lost due to work-related injuries only includes the work-related injury identification procedures passed by the local social insurance administrative department.

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員工安全教育

為提升員工對職業健康與安全的認知,本 年度內,集團組織了多場培訓與宣傳活 動,增強員工的自我防治意識與能力,有 效降低潛在事故風險。

EMPLOYEE SAFETY EDUCATION

To enhance employees' awareness of occupational health and safety, the Group organized multiple training and promotional activities throughout the year, raising employees' self-prevention and treatment awareness and effectively reducing potential accident risks.

案例:中國同輻大廈2024年消防演練活動 Case: 2024 Fire Drill at CIRC Building

2024年7月31日,本集團組織開展實戰化消防應急演練,模擬真實火災場景,系統檢驗消防滅火與緊急 疏散流程的實效性。此次演練覆蓋中核同興(北京)核技術有限公司、北京三金電子集團有限公司後勤 人員及中國同輻大廈3至4層全體員工,通過分組協作機制明確各崗位職責分工,涵蓋火源撲救、人員疏 散及跨部門協調等關鍵環節。演練中,員工嚴格按照預案操作,實操消防器材使用、檢驗逃生通道暢通 性,並測試應急指揮體系運作效率。通過此次演習,不僅有效提升了員工的火災應對能力與安全意識, 還針對演練中發現的薄弱環節制定了改進方案,進一步完善了企業應急管理機制與風險防控體系,為築 牢安全生產防線提供實踐支撐。

On July 31, 2024, the Group organized a realistic fire emergency drill, simulating an actual fire scenario to test the effectiveness of firefighting and emergency evacuation procedures. The drill covered personnel from China Nuclear Tongxing (Beijing) Nuclear Technology Co., Ltd., Beijing Sanjin Electronics Group Ltd. logistics staff, and employees from the 3rd and 4th floors of the CIRC building. Through a collaborative group mechanism, each participant was assigned specific responsibilities, covering key aspects such as fire source suppression, personnel evacuation, and inter-departmental coordination. During the drill, employees strictly followed the plan, using fire-fighting equipment, verifying the accessibility of escape routes, and testing the efficiency of the emergency command system. This exercise effectively enhanced employees' fire response abilities and safety awareness while addressing weak points identified during the drill, developing improvement plans, and further refining the Company's emergency management mechanism and risk control system.



消防演練現場 Fire Drill Scene

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案例:高風險作業專項培訓

Case: High-Risk Operations Specialized Training

為強化高風險作業安全管理,本集團於2024年分階段實施專項培訓計劃:4月及9月於廣州中國石化華南 安全仿真與實操培訓基地,舉辦「高風險作業專項培訓課程」。該培訓聚焦實務操作能力提升,透過仿真 演練與實操訓練,系統性強化學員對高風險作業的安全管控能力,全面提升全系統作業安全水平。 To strengthen safety management for high-risk operations, the Group implemented a phased specialized training program in 2024. In April and September, the training took place at Sinopec South China Safety Simulation and Practical Training Base in Guangzhou, focusing on "High-Risk Operations Specialized Training Courses." This training focused on improving practical operational capabilities and systematically strengthening participants' safety control abilities for high-risk operations, greatly enhancing the overall safety level of operations across the system.



高風險作業專項培訓現場 High-Risk Operations Specialized Training Scene

案例:中國同輻射環境監測專業培訓

Case: CIRC Radiation Environment Monitoring Specialized Training

2024年6月,本集團以「輻安杯」第一階段競賽為契機,系統性開展輻射環境監測專業培訓。該培訓課程 針對參賽人員及相關作業人員,重點強化輻射監測理論知識與實務操作技能,有效提升從業人員專業素 質,為輻射安全防護工作提供堅實的技術支撐。

In June 2024, leveraging the first phase of the "Radiation Safety Cup" competition, the Group systematically conducted specialized training on radiation environment monitoring. The training targeted competition participants and relevant operators, focusing on enhancing knowledge of radiation monitoring theory and practical skills, effectively improving the professional quality of workers and providing solid technical support for radiation safety protection.



「輻安杯」及專業培訓參與人員合照 Group Photo of "Radiation Safety Cup" and Specialized Training Participants

精進供應鏈管理

本集團將供應商的可持續管理視為確保服 務品質的核心基石,並致力於將可持續發 展理念從自身營運延伸至整個供應鏈體 系。通過高效的供應鏈管理,我們精選優 質且可靠的供應商資源,與恪守商業道德 規範的供應商建立長期穩固的合作關係。 本集團始終秉持「公開、公平、公正、擇 優、誠實守信、規範高效、保障供給」的 原則,與供應商攜手打造互信共贏的戰略 夥伴關係,共同推動可持續發展目標的實 現。

供應商採購管理

在招標採購程序的規範化管理方面,本 集團嚴格遵守《中華人民共和國招標投 標法》及《中華人民共和國招標投標法實 施條例》等相關法律法規,並結合實際需 求,制定了中國同輻《供應商管理辦法》 《採購管理辦法》《招標採購管理辦法》及 《非招標採購管理辦法》等一系列內部制 度,以確保供應鏈運作的高效性與穩定 性。在供應商管理方面,本集團依據中核 集團《供應商管理辦法》及《供應商管理控 制程序》等內部規範,對供應商進行全面 且系統化的管理,並從以下關鍵方面對供 應商進行嚴格審核與評估:

ENHANCING SUPPLY CHAIN MANAGEMENT

The Group views the sustainable management of suppliers as the cornerstone for ensuring service quality and is committed to extending the concept of sustainable development from its operations to the entire supply chain. Through efficient supply chain management, we select high-quality and reliable supplier resources and establish long-term, stable partnerships with suppliers who adhere to business ethics. The Group always follows the principles of "openness, fairness, impartiality, selection based on merit, honesty and trustworthiness, standardization and efficiency, and ensuring supply" in its relationships with suppliers, jointly creating a mutually trusting and win-win strategic partnership to promote the achievement of sustainable development goals.

SUPPLIER PROCUREMENT MANAGEMENT

In terms of the standardized management of the bidding procurement process, the Group strictly adheres to relevant laws and regulations, such as the Bidding Law of the People's Republic of China and the Implementing Regulations of the Bidding Law of the People's Republic of China. Based on actual needs, the Group has developed a series of internal systems, including CIRC's Supplier Management Measures, Procurement Management Measures, Bidding Procurement Management Measures, and Non-Bidding Procurement Management Measures, to ensure the efficiency and stability of supply chain operations. In supplier management, the Group follows the Supplier Management Measures and Supplier Management Control Procedures of China Nuclear Group, conducting comprehensive and systematic management of suppliers. The suppliers are strictly audited and evaluated in the following key areas:





為實現供應商管理的數字化與精細化,本 集團要求各附屬公司建立完善的供應商管 理系統,並由採購管理部主導管理,協調 使用部門、採購部門、倉儲管理部門及售 後服務部門等單位, 實現信息共享與高效 協作。對供應商的表現進行動態化、量化 考核是強化供應鏈管理的重要舉措。中國 同輻每年統一組織開展供應商履約評價, 對於未能達到履約要求的供應商,將撤銷 其合格供應商資格;對於存在不良行為的 供應商,則將其納入供應商黑名單或白名 單進行管理。各附屬公司亦根據實際情況 制定並實施相應的考核管理制度,並嚴格 按照國家藥品監督管理局備案的文件要 求,對供應商進行審核、聘用,或對其違 約行為進行相應處理。

本集團嚴格遵循國家法律法規及中核集團 相關規定,實施規範化的採購管理。為確 保產品質量與供貨穩定,我們制定了戰略 類及優勢類產品採購目錄,並要求附屬公 司強化採購計劃性,建立採購計劃編審程 序,統一管理採購活動。除緊急採購、公 共資源交易平台招標及涉密採購外,所有 採購均通過中核集團電子採購平台進行, 確保過程透明高效。 To achieve the digitalization and refinement of supplier management, the Group requires its subsidiaries to establish a complete supplier management system, which is managed and coordinated by the Procurement Management Department. This system integrates the coordination between departments such as the purchasing, warehousing, and after-sales service departments to facilitate information sharing and efficient collaboration. Conducting dynamic and quantitative evaluations of supplier performance is an important measure to strengthen supply chain management. CIRC organizes a unified annual evaluation of supplier performance. Suppliers who fail to meet performance requirements will have their status as gualified suppliers revoked, while those with misconduct will be placed on a supplier blacklist or whitelist for management. Each subsidiary also establishes and implements corresponding evaluation and management systems based on actual situations, and conducts supplier audits or handles their breach of contract according to the file requirements filed with the National Medical Products Administration.

The Group strictly adheres to national laws and regulations as well as the relevant regulations of CNNC, implementing standardized procurement management. To ensure product quality and stable supply, we have established strategic and advantageous product procurement catalogs, and we require subsidiaries to strengthen procurement planning, establish procurement planning and review procedures, and manage procurement activities centrally. Except for emergency procurement, public resource platform tenders, and confidential procurement, all procurement is conducted through the CNNC's electronic procurement platform, ensuring transparency and efficiency throughout the process.

對於依法必須招標的工程建設項目,我們 嚴格執行招標程序,包括發佈公告、資格 審查、組建評標委員會、開標、評標、公 示及定標等步驟,確保公開、公平、公 正。非招標採購項目則依據公司採購管理 辦法執行,除單一來源採購外,均採用競 爭性方式確定供應商,以實現資源高效配 置。單一來源採購適用於獨有專利或技術 情況,通過談判確定價格,確保合理性與 透明度。

作為中核集團旗下單位,中國同輻自 2024年10月1日起全面實施「一級集採+ 二級集採=100%」政策,嚴格執行中核集 團集採要求,推動採購活動的規範化與集 中化管理,進一步提升採購效率與供應鏈 穩定性,為企業可持續發展提供堅實保 障。 For engineering construction projects that are legally required to be tendered, we strictly follow the tendering procedures, including announcement publication, qualification review, establishment of the evaluation committee, opening bids, evaluation, public announcement, and awarding the contract, ensuring openness, fairness, and justice. Non-tendered procurement projects follow the Company's procurement management regulations, and except for single-source procurement, suppliers are determined through competitive methods to achieve efficient resource allocation. Single-source procurement applies to unique patents or technologies, and prices are negotiated to ensure rationality and transparency.

As a subsidiary of CNNC, CIRC will fully implement the "Primary Centralized Procurement + Secondary Centralized Procurement = 100%" policy starting from October 1, 2024. This policy strictly enforces China Nuclear Group's centralized procurement requirements, promoting standardized and centralized procurement management, further improving procurement efficiency and supply chain stability, and providing solid support for the Company's sustainable development.

		2024年
供應商數據	Supplier Data	2024
供應商總數	Total Number of Suppliers	793
以地區劃分	By Geographical Region	
中國地區	China Region	778
海外地區	Overseas	15

供應商准入把控

本集團對供應商准入實施嚴格把關,並進 行動態評估與分級管理,以確保供應鏈 的高效運作與風險控制。在准入審產 段,我們採用「環境-安全-社會責任」 三級評估體系,全面審查供應商的環保資 質(如排污許可)、安全記錄(如輻射防環 額鍵指標。根據審核結果,我們將供應 劃分為核心供應商、重要供應商及一般供 應商,實現資源的合理配置與風險的有 之環境保護理念,優先採購對環境影響 低的商品與服務,積極推廣環保產品的 開,全面實徹綠色環保理念,推動供應鏈 的可持續發展。

SUPPLIER ACCESS CONTROL

The Group implements strict controls over supplier access, conducting dynamic evaluations and hierarchical management to ensure the efficient operation and risk control of the supply chain. During the access review stage, we adopt a "Environmental-Safety-Social Responsibility" three-tier evaluation system, thoroughly examining key indicators of suppliers, such as environmental qualifications (e.g., pollution discharge permits), safety records (e.g., radiation protection certifications), and labor rights (e.g., compliance with labor contracts). Based on the review results, suppliers are categorized into core suppliers, important suppliers, and general suppliers, allowing for the rational allocation of resources and effective risk management. Additionally, we incorporate environmental protection concepts into all links of the supply chain, prioritizing the procurement of goods and services with lower environmental impact and actively promoting the use of eco-friendly products, fully implementing the green environmental protection concept, and driving the sustainable development of the supply chain.

中國同輻分類 CIRC's Classification	板塊/單位分類 Division/Unit Classification	准入方式 Access Method
核心物項供應商 Core Item Suppliers	I類供應商 Class I Suppliers	 經過中核集團統一准入評價,納入名錄直接採信。 After undergoing a unified access evaluation by CNNC, suppliers that meet the criteria are directly accredited and included in the approved vendor list.
重要物項供應商 Important Item Suppliers		
Suppliers 一般物項供應商 General Items Supplier	II類供應商 Class II Suppliers	 經過中核集團統一准入評價,納入名錄直接採信: After undergoing a unified access evaluation by CNNC, suppliers that meet the criteria are directly accredited and included in the approved vendor list; 按GSP、GMP管理的供應商,通過體系認證後,採信評價結果,納入中國同輻合格供應商名錄; Suppliers managed under GSP (Good Storage Practice) and GMP (Good Manufacturing Practice) standards, who pass the system certification, are accredited based on the evaluation results and included in the CIRC qualified supplier list; 經過合格供應商評價合格的,納入中國同輻合格供應商名錄,有效期三年。 Those who have passed the evaluation of qualified suppliers will be included in the list of qualified suppliers

供應商分級分類管理措施

Supplier Tiered Management Method

供應商表現評估

本集團將供應商所承擔的社會責任、環境 責任及其環境和社會績效表現作為評估的 重點考量因素,並實行嚴格的供應商准入 管理機制,並開展事前、事中、事後的表 現跟蹤和檢查。通過法律審查、技術識 別、現場評審、數據評審和備案評審等程 序,我們嚴把供應商聘用入口關及後續的 風險管控,確保供應鏈的可持續性與合規 性。

為有效控制供應鏈中的環境及社會風險, 本集團不定期對可能產生風險的事項進行 評估,並提出相應的管控舉措。例如,在 合規風險規避方面,中國同輻全面開展合 規風險排查與風險控制工作,要求推廣服 務商(CSO公司)出具反商業賄賂及無關 聯關係承諾函,確保合作過程的廉潔性與 商業往來的正當性。針對核心供應商和重 要供應商,我們建立了重大風險管控、跟 蹤、監測及預警機制,用於識別及評估供 應鏈對環境及社會可能產生的重大負面影 響。為強化供應鏈韌性,中國同輻建立備 用供應商名錄,以保障供應鏈的穩定性。 同時,集團積極推動供應鏈社會責任協同 發展,定期舉辦輻射安全操作、職業健康 防護等專業培訓課程,並與中國輻射防護 研究院合作提供技術指導,協助供應商提 升安全操作規範與風險管控能力。

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SUPPLIER PERFORMANCE EVALUATION

The Group focuses on evaluating suppliers' social responsibilities, environmental responsibilities, and their environmental and social performance. We implement a strict supplier access management mechanism and track and inspect supplier performance before, during, and after the procurement process. Through legal reviews, technical identification, on-site reviews, data reviews, and record reviews, we rigorously control supplier entry and manage subsequent risks to ensure the sustainability and compliance of the supply chain.

To effectively control environmental and social risks in the supply chain, the Group periodically assesses potential risks and proposes corresponding control measures. For example, in terms of compliance risk avoidance, CIRC fully conducts compliance risk investigations and control, requiring service providers (CSO companies) to submit anti-commercial bribery and no conflict-of-interest declarations to ensure the integrity of the cooperation process and the legitimacy of business interactions. For core and important suppliers, we have established major risk control, tracking, monitoring, and early warning mechanisms to identify and assess potential negative impacts on the environment and society caused by the supply chain. To enhance the resilience of the supply chain, CIRC has established a list of backup suppliers to ensure the stability of the supply chain. Additionally, the Group actively promotes the collaborative development of social responsibility in the supply chain, regularly organizing professional training courses on radiation safety operations, occupational health protection, and collaborating with the China Radiation Protection Institute to provide technical guidance, assisting suppliers in enhancing safety operation norms and risk control capabilities.

中國同輻對供應商採取標準化評估及管 理。報告期內,本集團所有供應商均統一 執行以上有關評估供應商的慣例之供應 商。同時,各附屬公司結合實際情況制定 各自的供應商管理制度,明確規定供應商 的質量評估方式,包括文件資質審計、現 場質量審計、書面審計及樣品小試等多種 形式。對於關鍵原輔料的現場質量審計, 參與人員需詳細記錄供應商的廠房、設施 及設備狀況,並在審計報告中確認供應商 是否持有藥品經營管理質量規範(GSP)證 書、藥品生產質量管理規範(GMP)證書, 以及是否通過質量管理體系、環境管理體 系和職業健康安全管理體系等相關認證。 此外,對於中國同輻白主投資的建設項 目,我們確保每個項目均包含環保相關投 入,並優先採購環境保護及污染防治設 施,以全面落實綠色發展理念,推動企業 的可持續發展。

在涉及放射性設施建設的供應商項目中, 我們推動社區聽證會機制,公開環境影響 數據,以降低公眾疑慮。通過第三方審計 對重點供應商進行突擊檢查,審計結果將 直接影響後續訂單分配。同時,我們在年 度相關報告中公開供應鏈風險管控績效, 包括供應商違規事件及整改情況,以增強 透明度與公信力,進一步推動供應鏈的可 持續發展。 CIRC applies standardized evaluations and management for suppliers. During the Reporting Period, all suppliers of the Group adhered to the above evaluation practices. Additionally, each subsidiary formulates its own supplier management regulations based on actual conditions, clearly defining the methods of supplier quality evaluation, which include document qualification audits, on-site quality audits, written audits, and small-scale sample testing. For on-site quality audits of key raw and auxiliary materials, the participants must carefully record the supplier's plant, facilities, and equipment conditions and confirm in the audit report whether the supplier holds GSP (Good Supply Practice) and GMP (Good Manufacturing Practice) certificates, as well as whether they have passed relevant certifications for quality management systems, environmental management systems, and occupational health and safety management systems. Moreover, for construction projects independently invested by CIRC, we ensure that each project includes environmental protection investments and prioritize the procurement of environmental protection and pollution control facilities to fully implement the concept of green development and promote corporate sustainable development.

In supplier projects involving radiation facility construction, we implement a community hearing mechanism, openly disclosing environmental impact data to reduce public concerns. Third-party audits are carried out for key suppliers, and the audit results directly affect the allocation of subsequent orders. Additionally, we publicly disclose the performance of supply chain risk control in our annual reports, including supplier violations and corrective actions, to enhance transparency and credibility, further promoting the sustainable development of the supply chain.

共築美好社會

本集團在專注業務發展的同時,秉持感恩 之心積極履行社會責任,由綜合部門專責 對接社區政府部門,通過參與社區交流會 議及青年聯席會等平台,主動提出「社區 共建」方案並響應「社會資源共享」倡議, 致力在創造經濟效益的同時,系統性地實 現企業發展與社區可持續需求的雙向契 合。中國同輻以此實踐「經濟社會效益並 重」的核心理念,持續完善對社區需求的 響應機制。

參與公益實踐

慈善捐贈體系

我們嚴格遵循《中華人民共和國公益事業 捐贈法》及《中國核工業集團有限公司對 外捐贈管理辦法》等法律法規,積極開展 社會捐贈活動。根據規定,各直屬單位及 所屬單位的捐贈工作需經內部決策程序審 議通過;對於已承諾的捐贈,必須誠實履 行,嚴禁任何虛假宣傳或承諾行為。依據 中國同輻《對外捐贈管理辦法》,我們根據 資助對象的不同,將對外捐贈劃分為多種 類型,分類如下:

BUILDING A BETTER SOCIETY

While focusing on business development, the Group is committed to fulfilling its social responsibility with a grateful heart. The comprehensive department is dedicated to liaising with community government departments, actively participating in community meetings and youth joint conferences, and proposing "community co-construction" programs in response to the "shared social resources" initiative. The Group is dedicated to aligning economic benefits with the sustainable needs of the community in a systematic way, while pursuing the core concept of "balancing economic and social benefits," continuously improving its response mechanism to community needs.

PARTICIPATION IN PUBLIC WELFARE PRACTICES

CHARITABLE DONATION SYSTEM

We strictly adhere to the *Public Welfare Donation Law of the People's Republic of China* and the China National Nuclear Corporation's External Donation Management Measures, actively carrying out social donation activities. According to regulations, the donation work of subordinate and affiliated units must be reviewed and approved through internal decision-making procedures. Committed donations must be fulfilled honestly, and any false publicity or promises are strictly prohibited. Based on CIRC's External Donation Management Measures, we classify donations into various types according to the funding recipients:

救濟性捐贈 Relief Donation

- 向遭受自然災害或者定點援助地區、困難的社會弱勢群 體和個人提供用於生產、生 活救濟、救助的捐贈
- Providing donations for production, livelihood relief, and assistance to areas affected by natural disasters or designated for targeted aid, and to socially vulnerable groups and individuals facing difficulties

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公益性捐贈 Charitable Donation

- 向教育、科技、文化、衛 生、體育等事業以及環境保 護及節能減排等社會公益事 業的捐贈
- Providing donations to educational, scientific, cultural, health, sports initiatives, as well as social welfare projects related to environmental protection and energy conservation and emission reduction

其他捐贈 Other Donation

- 除上述捐贈以外,出於弘揚 人道主義目的或者促進社會 發展與進步以及中核集團履 行社會責任需要的其他社會 公共福利事業的捐贈
- Besides the aforementioned donations, donations for other social public welfare projects aimed at promoting humanitarianism, facilitating social development and progress, and fulfilling the social responsibilities of CNNC

社區公益活動

中國同輻積極響應健康中國戰略,踐行社 會責任,積極參與各類公益活動,包括救 濟地震災區、開展教育扶貧等,以身作則 推動民眾生活改善與社區發展,為社會創 造更多價值。

COMMUNITY WELFARE ACTIVITIES

CIRC actively responds to a "Healthy China" Strategy, practices social responsibility, and participates in various welfare activities, including earthquake relief and educational poverty alleviation, to improve public living standards and community development, creating more value for society.

案例:「中核研學」走進海淀區紫竹院街道社區 Case: "CIRC Research Study" in Haidian District Zizhuyuan Street Community

2024年11月23日,中國同輻協同中核傳媒,聯合海淀區紫竹院街道婦女聯合會、廠窪第二社區,舉辦 「鴻鵠海淀童向未來——紀念我國第一顆原子彈爆炸成功60週年、慶祝核工業創建70週年」主題科普文 化研學活動。來自廠窪第二社區與中國同輻職工子女共計50餘名青少年參加本次活動。

On November 23, 2024, CIRC, in collaboration with China Nuclear Media, the Haidian District Zizhuyuan Street Women's Federation, and Changwa Second Community, organized a theme science popularization and cultural study activity titled "Homing in on Haidian, Kids Looking Toward the Future – Commemorating the 60th Anniversary of China's First Atomic Bomb Explosion Success, Celebrating the 70th Anniversary of the Nuclear Industry". Over 50 young people from the Changwa Second Community and CIRC employees' children participated in this event.

活動期間,青少年們參觀了中國同輻企業展廳,走進核醫療健康和輻照應用世界,進一步了解核技術應用,深刻感受中國同輻「同濟民生 負責社會」的集團宗旨和文化內涵。

During the event, the youths visited the CIRC exhibition hall and entered the world of nuclear medical health and irradiation applications, further understanding the application of nuclear technology and deeply experiencing CIRC's corporate mission and cultural values of "Caring for People, Responsible for Society".



廠窪第二社區青少年與中國同輻職工子女參觀中國同輻企業展廳 Youths from Changwa Second Community and CIRC Employee Children Visiting CIRC Exhibition Hall

案例:中國同輻攜手蒼溪縣人民醫院舉辦健康義診活動 Case: CIRC and Cangxi County People's Hospital Health Clinic

2024年4月16日,在全國腫瘤防治宣傳週期間,中國同輻攜手蒼溪縣人民醫院,在蒼溪縣舉辦「核護健康,護『胃』先行」健康義診活動,向現場200餘名群眾免費進行幽門螺旋桿菌呼氣檢測和健康諮詢,幫助到場群眾了解、認識幽門螺桿菌的危害性,科普癌症早篩、早診、早治常識,提高對胃健康的重視。 On April 16, 2024, during the National Cancer Prevention and Treatment Week, CIRC, in collaboration with Cangxi County People's Hospital, held a "Nuclear Health Protection, Protecting 'Stomach Health' First" free health check-up event in Cangxi County. Over 200 people received free Helicobacter pylori breath tests and health consultations, helping the public understand the harm of Helicobacter pylori, raising awareness of early screening, diagnosis, and treatment for cancer, and emphasizing the importance of stomach health.



蒼溪縣人民醫院健康義診活動現場 Health Check-up Event at Cangxi County People's Hospital

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案例:中核海得威開展核科普開放週暨公益義診活動 Case: Headway's Nuclear Science Popularization Week and Free Health Clinic

2024年9月27日,中核海得威聯合都江堰市第二人民醫院、銀杏街道惠民社區黨支部共同開展了以 「『核』你在一起 共創『核』美家園」為主題的核科普開放週暨公益義診活動,向社區居民科普了碳-14核 素在幽門螺桿菌檢測領域的運用以及幽門螺桿菌的危害,促進公眾走近核、了解核、支持核,改變公眾 「談核色變」觀念。

On September 27, 2024, Headway partnered with Second People's Hospital of Dujiangyan City, the Yinxing Street HuiMin Community Party Branch, and others to organize the "Nuclear Science Together, Creating a Beautiful 'Nuclear' Home" nuclear science popularization week and free health clinic event. This activity promoted the use of Carbon-14 isotopes in Helicobacter pylori testing and informed residents about the dangers of Helicobacter pylori, encouraging the public to approach and understand nuclear science and change their negative perceptions.



公益義診活動現場 Free Health Clinic Event

案例:中國同輻團委開展學雷鋒志願服務活動 Case: CIRC Youth League Committee Voluntary Service for Health

2024年3月5日,中國同輻團委與北京市海淀區紫竹院街道團委、北京核工業醫院團委、中核海得威團 委、原子高科團委聯合舉辦「核護健康,護『胃』先行」志願義診活動,為紫竹院街道片區企業和社區居民 免費進行幽門螺旋桿菌呼氣檢測和健康諮詢。

On March 5, 2024, the CIRC Youth League Committee, in collaboration with the Haidian District Zizhuyuan Street Youth League Committee, Beijing Nuclear Industry Hospital Youth League Committee, Headway Youth League Committee, and HTA Youth League Committee, held a "Nuclear Health Protection, Protecting 'Stomach Health' First" volunteer health clinic activity, providing free Helicobacter pylori breath tests and health consultations for enterprises and residents in the Zizhuyuan Street area.



志願服務活動現場 Volunteer Service Event

助力鄉村振興

作為央企,中國同輻始終踐行社會責任, 深度參與鄉村振興戰略,並取得顯著成 效。2024年度,我們通過無償幫扶白河 縣衛生健康局、雅江縣、大關鎮等,助力 完善基礎設施,提升公共教育、醫療水 平,扶持特色產業發展。通過採購定點幫 扶地區農特產品,助力農民增收,推動產 業發展,助力鄉村振興工作。同時,我們 積極響應國家區域協調發展戰略,以「整 體•協同」為目標,持續推動西南地區黨建 監督協同中心的運營工作,助力區域經濟 社會發展。為進一步強化鄉村振興工作的 組織保障,我們成立了中國同輻鄉村振興 及定點幫扶工作領導小組。

建設無障礙環境

我們透過多元舉措落實經濟社會無障礙環 境建設,例如配合社區制定「交通錯峰機 制」,於學生上下學時段封閉鄰近校園出 入口以保障通勤安全。同時,在此基礎 上,我們更制定職工車輛停放專項管理規 範,確保消防通道暢通無阻。此類行動不 僅強化社區基礎安全,更體現企業兼顧經 濟社會效益與無障礙環境發展的核心價 值。

SUPPORTING RURAL REVITALIZATION

As a state-owned enterprise, CIRC has always been committed to fulfilling its social responsibility and has deeply participated in the rural revitalization strategy, achieving remarkable results. In 2024, we assisted in improving infrastructure, enhancing public education and medical levels, and supporting the development of special industries in areas such as Baihe County Health Bureau, Yajiang County, and Dagan Township. By purchasing local agricultural and specialty products from the targeted assistance areas, we helped increase farmers' income and promoted industrial development, thus contributing to rural revitalization. Additionally, we actively respond to the national coordinated regional development strategy, with the goal of "overall and collaborative" development, continuing to promote the operation of the Southwest Regional Party Building Supervision Collaborative Center to support regional economic and social development. To further strengthen the organizational guarantee for rural revitalization, we established the CIRC Rural Revitalization and Targeted Assistance Leading Group.

BUILDING AN ACCESSIBLE ENVIRONMENT

We implement various measures to promote the construction of an accessible economic and social environment. For example, we collaborate with the community to establish a "traffic peak-shift mechanism" by closing the entrances and exits near schools during student arrival and departure times to ensure commuting safety. Furthermore, we have also developed specialized management regulations for employee vehicle parking to ensure that fire lanes remain unobstructed. These actions not only enhance community safety but also reflect the core value of the Company in balancing both economic and social benefits while promoting the development of an accessible environment.

集團治理制度搭建

集團治理架構

中國同輻黨委、股東大會、董事會、監事 會各司其職,各負其責,協調運轉,有效 制衡,把加強黨的全面領導和完善公司治 理相統一。

GROUP GOVERNANCE SYSTEM SETUP

GROUP GOVERNANCE STRUCTURE

The Party Committee, Shareholders Meeting, the Board of Directors, and Board of Supervisors of CIRC each perform their respective duties and responsibilities, operating in coordination with effective checks and balances, unifying the strengthening of the Party's overall leadership and the improvement of corporate governance.



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實現黨的領導和完善公司治理相統一,動 態優化權力清單,各治理主體各司其職, 各負其責,協調運轉,有效制衡。完善公 司治理制度體系。修訂股東大會議事規 則、董事會議事規則等,形成以公司章程 為核心,以「三重一大」管理規定、董事 會授權規定、總經理授權辦法為支撐,以 股東會、董事會議事規則等議事規則為保 障的「1+3+8+N」公司治理制度體系。

集團治理內控體系

中國同輻按照國資委和中核集團關於建立 健全內控體系的要求,從制度體系優化、 提升制度治理效能、強化合規管理,構建 了法律、合規、風險、內控「四合一」協 同運作機制,制定「四合一」大合規體系 建設方案,形成統一的風險清單、統一的 合規標準和關鍵控制點等事項清單,推動 風險、內控、合規、法務等職能整合,實 現「四合一|機制協同、控制協同、保障 協同。即以體制協同為前提,以體系協同 為基礎,以機制協同為主線,以規範化、 流程化為手段,以人才隊伍建設為保障, 聚焦關鍵事項實現「一崗式審查」,聚焦內 控體系實現「一站式評價」,聚焦風險管控 實現「全景式支持」,加強統籌協調,提高 管理效能,切實保障企業依法合規穩健經 營,推進公司高質量發展。

根據國家法律法規等外部監管規定、中核 集團管理要求,確保公司各項制度和業務 流程符合內控要求和風險應對措施,公司 在資金、招投標等重點領域建立並逐步完 善了制度體系。涉及資產管理方面的制度 共計9項,財務會計領域共計43項制度, 用於防止、發現、糾正錯誤與舞弊,保證 會計資料的真實、合法、完整,具備完善 的資金管理內控管理制度及流程。 To unify Party leadership with the improvement of corporate governance, we continuously optimize the list of powers, ensuring that each governance entity performs its duties and is effectively checked and balanced. We have improved the corporate governance system, revising the rules for the Shareholders' Meeting and Board of Directors to form a "1+3+8+N" corporate governance system, with the Company's articles of association as the core, supported by management regulations such as the "Three Major and One Large" management rules, Board of Directors authorization regulations, and General Manager authorization methods, with rules for the Shareholders' Meeting and Board of Directors meetings ensuring a solid foundation for governance.

GROUP GOVERNANCE INTERNAL CONTROL SYSTEM

CIRC, in accordance with the requirements of the State-owned Assets Supervision and Administration Commission (SASAC) and CNNC, has built a legal, compliance, risk, and internal control "four-in-one" collaborative operation mechanism, following the guidelines for optimizing the system framework, improving the effectiveness of system governance, and strengthening compliance management. We have developed the "Four-in-One" large compliance system construction plan, forming unified risk lists, compliance standards, and key control point lists, driving the integration of risk, internal control, compliance, and legal functions. This approach focuses on key matters and realizes "single-position review" for internal control systems, "one-stop evaluation" for internal control, and "panoramic support" for risk management, improving coordination and enhancing management efficiency. It ensures the Company operates legally, compliantly, and stably, promoting high-quality development.

In line with national laws and regulations and the management requirements of CNNC, we ensure that the Company's various systems and business processes comply with internal control requirements and risk mitigation measures. In key areas such as funds and tendering, we have established and gradually improved the system framework. The Company has 9 systems related to asset management and 43 systems in the financial and accounting field to prevent, detect, and correct errors and fraud, ensuring that accounting data is authentic, legal, and complete, with a comprehensive internal control system for fund management.

集團合規經營

合規組織架構

中國同輻將完善的治理體系視為企業可持 續發展的根基,通過分層治理架構強化集 團合規事宜執行及風險防控能力。在合規 運營機制設計中,董事會作為合規管理的 最高決策主體,法治委員會則承擔合規管 了。為確保合規管理縱 構,明確割分合規管理部門職能邊界並體 定高階管理層專責督導,從而系統化推進 合規管理體系運作。此架構設計嚴格遵循 國資監管要求,並與國際通行的治理準則 保持對標,有效支撐業務合規穩健發展。

GROUP COMPLIANCE OPERATIONS

COMPLIANCE ORGANIZATIONAL STRUCTURE

CIRC views the perfect governance system as the foundation for the Company's sustainable development, strengthening the execution of compliance matters and risk prevention capabilities through a hierarchical governance structure. In the compliance operation mechanism design, the Board of Directors is the highest decision-making body for compliance management, while the Legal Affairs Committee is responsible for the overall management of the compliance system. To ensure the deep advancement of compliance management, the Group has established a dedicated compliance management organizational structure, clearly defined the functional boundaries of the compliance management department and assigned senior management for supervision, thereby systematically advancing the operation of the compliance management system. This structure strictly follows SASAC's regulatory requirements and aligns with internationally accepted governance standards, effectively supporting the compliant and stable development of business operations.

本集團的合規組織架構如下圖所示:

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The compliance organizational structure of the Group is illustrated in the figure below:



Compliance Management Organizational Chart of CIRC

為全面強化中國同輻的合規管理體系,董 事會設立法治委員會及首席合規官,專責 統籌與執行本集團的各項合規事務。同 時,我們嚴格遵循《中央企業合規管理指 引(試行)》及《企業境外經營合規管理指 引》等規範性文件,制定並實施了《合規 管理制度》。該制度系統性地規範了合規 管理的核心內容,涵蓋制度制定、風險識 別、合規審查、風險應對、責任追究、考 核評價及合規培訓等關鍵環節,為企業的 合規運營提供了明確指引。

在此基礎上,中國同輻要求集團及各附屬 公司逐步建立與完善重點領域的專項合規 管理制度,包括市場銷售、建設工程、安 全環保、產品品質、勞動用工、財務税 收、知識產權、商業夥伴及贊助捐贈等領 域。同時,我們組織開展重點業務領域的 合規管理流程梳理,並設計合規審查、風 險防控等相關表單,以強化對關鍵業務環 節的監督與審查,確保集團在依法合規的 基礎上實現持續規範化運營與長遠健康發 展。 To fully strengthen CIRC's compliance management system, the Board of Directors has established a Legal Affairs Committee and a Chief Compliance Officer (CCO), who are responsible for coordinating and executing the Company's compliance matters. At the same time, we strictly adhere to normative documents such as the *Guidelines for Compliance Management of Central Enterprises (Trial)* and the *Guidelines for Overseas Business Compliance Management of Enterprises*, and have implemented the Compliance Management System. This system systematically regulates the core components of compliance management, covering the formulation of systems, risk identification, compliance training, providing clear guidance for the Company's compliant operations.

As a foundation, CIRC requires the Group and its subsidiaries to gradually establish and improve special compliance management systems in key areas, including market sales, construction projects, safety and environmental protection, product quality, labor employment, financial taxation, intellectual property, business partners, and donations. Additionally, we organize the review of compliance management processes in key business areas, and design compliance review and risk prevention forms to strengthen supervision and auditing of critical business processes, ensuring the Group's sustained standardized operations and long-term healthy development based on compliance with laws.

合規管理制度

中國同輻以貫徹落實《中央企業合規管理 辦法》方案為重點,發佈《中國同輻關於 落實<中央企業合規管理辦法>工作方案》 及工作台賬,建立覆蓋各業務領域、各職 能線條、各級子企業的合規管理組織體 系,以及以合規管理基本制度為核心、合 規行為準則為基礎、重點領域合規指引為 補充的[1+N]合規管理制度體系。中國同 輻下屬成員單位原子高科發佈《反商業賄 賂合規指引》,為業務發展提供更高效、 更精準的合規支持。

2024年度,我們開展關鍵領域合規風險 跟蹤預警。一是組織各單位定期評估法律 合規風險情況,梳理法律合規風險清單。 針對識別出的法律合規風險,及時提示相 關部門及單位制定和實施風險應對預案, 有效應對合規風險。二是多方面、多維度 開展重點領域風險排查,準確掌握重點領 域風險敞口。針對成員單位的行政處罰事 項,完善行政處罰風險應對機制。通過對 網絡信息查詢,與業務部門溝通、召開專 題會議、法律合規審查等途徑實時收集、 分析各類合規風險信息,並向相關單位發 送《合規風險問詢函》,要求在規定時間 內對潛在風險進行處理並做出風險應對預 案,截至目前共出具8份。未來,我們將 會以「合規管理職責分工更加明晰、機制 運行更加順暢、合規意識更加牢固」為目 標,持續提升集團整體合規管理制度。

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COMPLIANCE MANAGEMENT SYSTEM

CIRC focuses on implementing the *Central Enterprise Compliance Management Measures* plan, issuing the *CIRC Work Plan for Implementing the Central Enterprise Compliance Management Measures* and a work ledger. We have established a compliance management organizational system that covers all business areas, functions, and subsidiaries. This is based on the core of the compliance management system, compliance behavior standards, and supplementary compliance guidelines for key areas, forming a "1+N" compliance management system. CIRC's subsidiary, HTA, issued the "Anti-Bribery Compliance Guidelines" to provide more efficient and precise compliance support for business development.

In 2024, we conducted tracking and early warnings of compliance risks in key areas. First, we organized each unit to regularly assess the legal compliance risks, compiling a risk list. For identified compliance risks, we promptly alerted relevant departments to formulate and implement risk response plans. Second, we conducted multi-dimensional risk assessments to accurately assess risk exposure in key areas. For administrative penalties imposed on member units, we improved the response mechanism. By guerying network information, communicating with business departments, holding special meetings, and conducting legal compliance reviews, we continuously collected and analyzed compliance risk information, sending "Compliance Risk Inquiry Letters" to relevant units, requesting them to process and create risk response plans within a specified period. To date, we have issued eight such letters. In the future, we will focus on clearer role division in compliance management, smoother system operation, and firmer compliance awareness, continuing to enhance the overall compliance management system of the Group.

合規審查及審計

中國同輻秉持「制度先行、風控為要、法 業互融」原則,體系化建構法律合規管理 矩陣。通過修訂核心制度釐清權責邊界, 創新全週期風控機制嵌入重大經營環節, 實施糾紛案件分級閉環管治,同步推進法 務職能從合規把關向價值創造轉型。

COMPLIANCE REVIEW AND AUDITING

CIRC adheres to the principle of "system first, risk control is key, integration of law and business," and systematically builds a legal compliance management matrix. By revising core systems to clarify responsibilities and innovating a full-cycle risk control mechanism embedded in major business processes, we implement graded management of dispute cases and simultaneously promote the transformation of legal functions from compliance assurance to value creation.

2024年度,集團修訂發佈《法律事務管理 辦法》,系統性規範規章制度審查、經濟 合同核驗、重大決策評估之適用範圍、作 業模式、時效標準及流程節點,實現三項 法律審核覆蓋率均達100%,同步建立審 核質量與時效雙維度考評機制。針對合同 管理領域,修訂並頒行《合同管理辦法》, 細化成員單位標準化實施細則,重點強化 本部合同範本庫建設,完成「授權加盟」 類合同範本編製並全面推廣應用,顯著提 升特殊業務領域契約文本規範性與管理效 能。

此外,集團亦構建「全週期法律護航」機 制,深度參與公司審批或主辦之新設公 司、資本運作、投資併購等重大專案,從 政策研判、律所委任、法律盡調、協議架 構設計等環節實施穿透式風險管控。同步 修訂《重大專案法律事務管理辦法》,明 定專案法律專員配置標準,以制度性規範 確保法務人員實質參與盡職調查、商務談 判、合同擬定等關鍵環節,形成本部統籌 指導、外聘律所專業支撐、成員單位協同 落實的三維聯動模式,有效強化專案落地 之合規保障。 In 2024, the Group revised and published the "Legal Affairs Management Measures," systematically regulating the scope, working model, time standards, and process nodes for the review of rules, economic contract verification, and major decision evaluations, achieving 100% coverage of the three legal audits. We also established a dual-dimensional evaluation mechanism for the quality and timeliness of audits. For contract management, we revised and issued the "Contract Management Measures," detailing standardized implementation rules for member units, strengthening the construction of the contract template library at the headquarters, and completing the drafting and full implementation of contract templates for "authorized franchises." This significantly improved the standardization of contract texts and management efficiency in specialized business areas.

Additionally, the Group has built a "full-cycle legal protection" mechanism, deeply involved in the approval or management of major projects, such as the establishment of new companies, capital operations, and mergers and acquisitions. From policy analysis, law firm appointments, legal due diligence, to agreement structure design, we implement thorough risk management. We also revised the "Major Project Legal Affairs Management Measures," setting clear standards for project legal personnel allocation, ensuring that legal staff participate in key steps like due diligence, business negotiations, and contract drafting, creating a three-dimensional model involving headquarters coordination, external legal support, and member unit collaboration to strengthen compliance in project implementation.

經審查,2024年度全系統保持集團重大 訴訟案件零記錄,持續完善糾紛預防處置 機制。新版《法律糾紛案件管理辦法》採 用「定量+定性」雙重標準重構案件分級體 系,釐清本部與成員單位權責邊界,對標 集團授權清單實施300萬元以上案件提級 審批。貫徹集團「以案促管」指導方針, 制定《「以案施治」專項工作方案》,通過 鼓勵法務及業務人員直接代理案件、組織 庭審旁聽、建立定期跟進機制、實施領導 專項督導等措施,形成「存量案件精準化 解、潛在風險源頭防控」的閉環管理格局。

維護市場秩序

商業秘密保護

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本集團嚴格遵循《中華人民共和國廣告 法》開展廣告與標籤的市場管理工作,並 將夥伴的隱私與商業秘密保護置於重要位 置,以實際行動維護良好的市場秩序。在 強化自身及合作夥伴權益保護方面,我們 不僅嚴格遵守《中華人民共和國商標法》 及《中華人民共和國保守國家秘密法》等 相關法律法規,還制定了中國同輻《保密 工作管理規定》及《商業秘密保護工作管 理辦法(版次:2)》等內部政策,明確界 定商業秘密範圍,涵蓋重要供應商數據, 以及市場採購、營銷計劃、市場預測、產 銷策略、經營渠道、銷售方法、生產成本 等市場與經營信息。

保密工作的核心在於人防。我們要求員工 在入職前簽訂包含商業秘密保護條款的勞 動合同,嚴格控制商業秘密的知悉範圍。 同時,我們定期對商業秘密管理人員及知 悉人員進行保密教育培訓,提升保密意識 與能力,確保企業商業秘密的絕對安全。 After review, the Group maintained a zero record of major litigation cases in 2024, continuing to improve dispute prevention and resolution mechanisms. The new "Legal Dispute Case Management Measures" uses a "quantitative + qualitative" dual standard to restructure the case grading system, clarifying the responsibilities of the headquarters and member units, and implementing elevated approval for cases above 3 million yuan according to the Group's authorization list. We have also adopted the Group's "case-based management" guideline, drafting the "Special Work Plan for Case Management," which encourages legal and business personnel to directly manage cases, organize trial observations, establish regular follow-up mechanisms, and implement leadership supervision, forming a closed-loop management system for resolving existing cases and preventing potential risks.

MAINTAINING MARKET ORDER

PROTECTION OF COMMERCIAL SECRETS

The Group strictly adheres to the "Advertising Law of the People's Republic of China" and places the protection of partners' privacy and commercial secrets as a priority in its market management work. In strengthening the protection of its own and its partners' rights, the Group not only complies with the "Trademark Law of the People's Republic of China" and the "State Secrets Protection Law" but also has implemented internal policies such as the "Confidentiality Management Regulations" and the "Commercial Secrets Protection Management Measures (Version 2)," clearly defining the scope of commercial secrets, which include key supplier data and market information like procurement, marketing plans, sales strategies, production costs, etc.

The core of the confidentiality work is human control. We require employees to sign labor contracts containing commercial secrets protection clauses before joining the Company, strictly controlling the scope of who has access to commercial secrets. Additionally, we regularly provide confidentiality education and training to those in charge of managing commercial secrets, improving their awareness and abilities, ensuring the absolute security of the Company's commercial secrets.

反虛假宣傳

我們嚴格遵守國家法律法規,禁止對麻醉 藥品、精神藥品、醫療用毒性藥品、放射 性藥品等特殊藥品,以及藥品類易制毒化 學品、戒毒治療藥品、醫療器械和治療方 法進行廣告宣傳。

在報告期內,本集團未發生任何嚴重違反 廣告及標籤相關法律法規的情況,進一步 彰顯了我們對反虛假宣傳的長期承諾。

反不正當競爭

本集團嚴格遵循《中華人民共和國反不正 當競爭法》,在市場經營活動中明確禁止 混淆行為、商業賄賂及任何形式的不公平 競爭,堅守誠信經營原則,維護公平有序 的市場環境。為強化合規意識,我們要 求員工及合作經銷商簽署《廉潔從業責任 書》,明確規範其業務行為,從源頭杜絕 違規風險。

董事會管理及運作

董事會運作機制

中國同輻董事會高度重視並不斷加強公司 規範治理,通過各項舉措確保董事會科學 決策精準落地,形成完整的管理閉環,不 斷提升規範運作水平,2024年,董事會 共召開8次會議,其中定期會議4次,臨 時會議4次,共審議59項議案。

ANTI-FALSE ADVERTISING

The Group strictly complies with national laws and regulations, prohibiting advertising for narcotic drugs, psychoactive drugs, medical toxic drugs, radioactive drugs, and other special drugs, as well as for drugs with controlled substances, drug addiction treatment drugs, medical devices, and treatment methods.

During the Reporting Period, the Group did not encounter any significant violations of advertising and labeling-related laws, further demonstrating our long-standing commitment to preventing false advertising.

ANTI-UNFAIR COMPETITION

The Group strictly adheres to the "Anti-Unfair Competition Law of the People's Republic of China," clearly prohibiting confusion, commercial bribery, and any form of unfair competition in market activities. We uphold the principles of honest business practices, maintaining a fair and orderly market environment. To strengthen compliance awareness, we require employees and business distributors to sign the "Clean Business Responsibility Letter," clearly defining their business conduct and eliminating potential risks at the source.

BOARD MANAGEMENT AND OPERATIONS

BOARD OPERATIONS MECHANISM

CIRC attaches great importance to and continuously strengthens its corporate governance. Through various measures, the Company ensures that the Board makes scientific decisions and implements them accurately, forming a complete management loop. In 2024, the Board held eight meetings, four regular and four extraordinary, reviewing a total of 59 proposals.

董事會根據《董事會議事規則》,將科學決 策、民主決策和依法決策作為基本原則, 貫穿於各項決策的啓動、草案擬訂、決定 和調整的全過程中,確保董事會能夠高效 規範運作和科學決策。

董事會前,各位董事充分研讀董事會、專 門委員會議案資料,主動獲取相關信息, 詳細了解議案背景情況,對提交董事會審 議的各項議案進行認真審核,為科學決策 打下堅實基礎。董事會中,各位董事參與 審議涉及預算決算、總經理工作報告、聘 任審計機構、審計工作總結及審計計劃、 風險及內部控制管理報告、經理層業績考 核辦法、年度投資計劃、項目收購轉讓、 合規管理等董事會議案共計59項,以謹 慎的態度行使表決權,獨立、客觀、充分 地發表決策意見,推進董事會及各專門委 員會規範運作,切實維護公司和全體股東 利益。董事會後,各位董事積極跟蹤重要 事項的落實情況,定期跟經理層溝通決議 的執行情況和執行效果。董事還定期參加 公司的經濟運行分析會和重要專題會等重 要會議,聽取管理層針對各項重要事項匯 報,了解相關進展。同時,公司進一步完 善董事會決議執行情況的定期匯報制度; 於每一次定期董事會上,管理層匯報前期 董事會決議的執行情況,聽取董事的意見 和建議。

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According to the *Board of Directors' Rules of Procedure*, the Board adheres to the basic principles of scientific decision-making, democratic decision-making, and legal decision-making throughout the process of initiating, drafting, deciding, and adjusting proposals, ensuring that the Board operates efficiently and makes scientifically-based decisions.

Before each board meeting, all board members thoroughly study the materials for the board and specialized committee meetings, proactively gather relevant information, and understand the background of each proposal. This ensures that the decisions made are well-informed. During the board meetings, members reviewed 59 proposals covering budgets, general manager reports, hiring of audit agencies, audit summaries, risk and internal control management, performance evaluation, annual investment plans, acquisitions, compliance management, etc. With a cautious approach, they exercise their voting rights independently, objectively, and thoroughly to advance the board's and committees' operations and protect the interests of the Company and all shareholders. After the meeting, the board members actively follow up on the implementation of key decisions, regularly communicate with the management about the execution status and effects of decisions. They also attend key company meetings such as economic performance reviews and special topic meetings, where they listen to the management's reports on significant matters and understand progress. Meanwhile, the Company has further improved the system of regular reporting on the implementation of board resolutions by reporting on the implementation of previous board resolutions by the management at each regular board meeting and listening to the opinions and suggestions of the directors.

服務保障機制

為提升外部董事的工作效率與響應速度, 我們建立了外部董事專屬聯繫機制,實施 一對一聯繫制度,以更迅速地回應外部董 事的工作需求,確保溝通順暢且即時。董 事會辦公室持續強化對外部董事履職保障 資源的統籌協調與組織落實工作,確保其 職能得到充分支持。通過系統化的資源整 合與分配,進一步提升外部董事的履職效 能。

此外,我們明確指定審計與法務部、人力 資源部、科技與數位化部、戰略規劃部作 為專門委員會的工作支持部門。這些部門 不僅對董事會議案提供專業審查意見,還 負責協調各業務部門落實外部董事提出的 相關工作要求,確保各項決策與建議得以 有效執行。

SERVICE SUPPORT MECHANISM

To improve the efficiency and responsiveness of external directors, we have established a dedicated contact mechanism, implementing a one-on-one contact system to promptly respond to their work needs and ensure smooth and immediate communication. The Board Office continuously strengthens the coordination and organization of resources to support external directors' roles, enhancing their operational effectiveness through systematic resource allocation.

Additionally, we have designated the Audit and Legal Department, Human Resources Department, Technology and Digitalization Department, and Strategic Planning Department as support departments for the specialized committees. These departments not only provide professional review opinions on board proposals but also coordinate various business departments to implement the related work requirements of external directors, ensuring the effective execution of decisions and suggestions.



Three-tiered "Board-Committee-Business Unit" Structure

信息支撐機制

為確保外部董事能夠全面掌握公司運營狀 況並提供科學決策支持,我們建立了定期 會議匯報機制。該機制持續在董事會定期 會議上匯報生產經營、風險管理、合規管 理、董事會授權執行情況以及董事會議定 事項的落實進展,確保各項工作透明化、 規範化。此外,每月月初向外部董事報送 月度經營情況簡報,及時傳遞公司生產經 營管理的最新動態信息,確保外部董事能 夠隨時掌握公司運營狀況,為其決策提供 有力依據。

為進一步加深外部董事對公司整體運營 情況的了解,公司年度工作會、黨委(擴 大)會、月度經營分析會及戰略研討會等 重要會議均邀請外部董事參加。通過參與 這些關鍵會議,外部董事能夠更全面地了 解公司戰略方向、經營狀況及風險管控措 施,從而為公司科學決策提供更有價值的 建議與支持。

實地調研機制

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2024年,我們圍繞裝備製造、科技研發、市場開拓、精益管理、協同發展等重點領域,組織開展7次專題調研活動。通過實地考察與深入交流,使外部董事能夠直觀了解公司生產經營的實際情況,掌握第一手資料。

INFORMATION SUPPORT MECHANISM

To ensure that external directors fully understand the Company's operational status and provide scientific decision-making support, we have established a regular reporting mechanism. This system ensures that we report on operations, risk management, compliance, board authorizations, and the progress of board resolutions at each regular board meeting, ensuring transparency and standardization. Additionally, we send monthly operational briefs to external directors at the beginning of each month, providing them with the latest updates on the Company's production and management, ensuring they have the information needed for decision-making.

To deepen external directors' understanding of the Company's overall operations, we invite them to attend important meetings such as the annual work conference, expanded party committee meetings, monthly performance analysis meetings, and strategic seminars. By participating in these key meetings, external directors can gain a broader understanding of the Company's strategic direction, operating conditions, and risk management measures, thereby providing more valuable suggestions and support for scientific decision-making.

ON-SITE RESEARCH MECHANISM

In 2024, we organized 7 special research activities around key areas such as equipment manufacturing, technological R&D, market development, lean management, and collaborative development. Through field visits and in-depth exchanges, external directors could directly understand the Company's actual operations and gain first-hand information.

這些調研活動涵蓋公司核心業務板塊及關鍵項these research activities focused on core business segments and 旨在幫助外部董事全面了解公司運營現狀、發展施projects, helping external directors fully grasp the Company's 頸及未來潛力。通過實地調研,外部董事能夠奧深ent operations, development bottlenecks, and future 入地參與公司戰略規劃與決策過程,為其更好她履ntial. By participating in these on-site investigations, external directors were better equipped to engage in strategic planning and decision-making, strengthening their ability to fulfill their roles

effectively.

案例︰2024年3月實地調研 – 廣州原子高科同位素醫藥有限公司 Case: On-site visit in March 2024 – Guangzhou HTA Isotope Pharmaceutical Co., Ltd.



案例[:]2024年4月實地調研 – 西安展實檢測工程有限公司 Case: On-site visit in April 2024 – Xian Zhanshi Testing Engineering Co., Ltd.



案例[:]2024年9月實地調研 – 中核海得威 Case: On-site visit in September 2024 – Headway



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履職能力機制

為進一步提升董事的履職能力與專業素 養,我們開展了「在港上市公司董事責 任」專題培訓,特邀海問律師事務所及信 永中和的資深專家,從董事責任、《中華 人民共和國公司法》修訂影響、財務報告 監管重點等方面進行深入講解,幫助董事 全面了解監管要求及履職責任,確保其在 公司治理中發揮更積極、專業的作用。

此外,董事還參加了集團舉辦的「總會計 師履職能力強化班」專題培訓。該培訓聚 焦財務管理、風險控制及合規運營等核心 領域,旨在提升董事在財務方面的專業能 力與綜合素質,為其更好地履行監督與決 策職能奠定堅實基礎。通過系列培訓活 動,董事不僅加深了對監管政策及履職要 求的理解,還進一步強化了財務管理與風 險防控能力,為公司高質量發展提供了有 力支持。

董事會多元構成

中國同輻董事會始終堅持外部董事佔多 數,11席董事中有8名外部董事,外部董 事中4名為獨立非執行董事,3名來自財 務、法律、核醫學領域的知名專家教授, 1名擁有香港上市公司超20年擔任獨立非 執行董事經驗。公司外部董事來源渠道廣 且均為業務、財務和法律等領域的專家, 從各個方面確保了董事會科學、理性決 策。

PROFESSIONAL COMPETENCE MECHANISM

To further improve the professional capabilities of the directors, we conducted specialized training on "Director Responsibilities in Listed Companies in Hong Kong," inviting senior experts from HAIWEN & PARTNERS and ShineWing Listed Corporate Services Limited to give in-depth lectures on director responsibilities, the impact of the revised *Company Law of the People's Republic of China*, financial reporting supervision, and more. This training aimed to help directors comprehensively understand regulatory requirements and their duties, ensuring they play a more active and professional role in corporate governance.

Additionally, the directors attended the "Chief Accountant Professional Competence Enhancement Course" organized by the Group. This training focused on core areas such as financial management, risk control, and compliance operations, aiming to enhance directors' professional abilities and overall quality in finance, thereby providing a solid foundation for their oversight and decision-making functions.

DIVERSE COMPOSITION OF THE BOARD OF DIRECTORS

The Board at CIRC consistently maintains a majority of external directors. Among the 11 board members, 8 of them are external directors, including 4 independent non-executive directors, 3 well-known experts and professors from the fields of finance, law, and nuclear medicine, and 1 director with over 20 years of experience serving as an independent non-executive director in listed companies in Hong Kong. The external directors come from diverse and wide-ranging fields, ensuring that the board makes scientifically rational decisions.

董事會管理權責邊界

中國同輻根據中核集團最新要求並結合中 國同輻實際,對公司各業務條線情況進行 全面梳理,使公司治理與經營管理實際相 銜接,最後形成包含黨的工作、制度建 設、戰略規劃、財務、產權、資產處置等 二十五大類、合計284項的中國同輻權力 清單(2024年版),進一步理清了各治理 主體的權責邊界,提高了公司治理效能。 同時完成對《「三重一大」管理規定》《黨委 會議事規則》《董事會授權管理規定》等制 度的升版,中國同輻黨委、股東大會、董 事會、經理層各司其職,各負其責,協調 運轉,有效制衡,實現了黨的領導和完善 公司治理的有機統一。

BOARD MANAGEMENT RESPONSIBILITIES AND BOUNDARIES

Based on the latest requirements from CNNC and CIRC's specific conditions, the Company conducted a comprehensive review of each business line to align corporate governance with operational management. This review resulted in the *CIRC Power List (2024 version)*, which includes 25 categories and a total of 284 items, further clarifying the responsibilities and boundaries of each governing body to enhance governance effectiveness. The Company also updated the *"Three Major Decisions" Management Regulation*, the *Party Committee Meeting Rules*, and the *Board Authorization Management Rules*, ensuring that the Party's leadership and the improvement of corporate governance are organically unified, with each governing body performing its role and responsibilities in coordination.

關注清廉經營

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本集團始終秉持誠實、廉正與公平的核心 價值觀,將道德操守與合規經營視為企業 發展的基石。為確保集團上下恪守高標準 的職業道德,我們制定並實施了一系列關 於反貪污、反賄賂及廉潔從業的內部制 度,明確規範本集團關聯人員的行為準 則,致力於營造清廉透明的企業文化。

FOCUS ON INTEGRITY IN OPERATIONS

The Group upholds the core values of "honesty, integrity, and fairness", considering ethical conduct and compliance as the foundation for corporate development. To ensure that all employees adhere to high standards of professional ethics, we have established and implemented a series of internal policies regarding anti-corruption, anti-bribery, and clean business practices. These policies clearly define the code of conduct for our associates, aiming to foster a transparent and ethical corporate culture.

我們對任何形式的貪污賄賂、勒索及欺詐 行為採取「零容忍」的態度,並建立了完 善的監督與舉報機制,鼓勵員工及利益相 關方積極舉報違規行為。在報告期內嚴格 遵守以下廉潔相關法律法規,並制定一系 列內部管理政策:

We adopt a "zero tolerance" approach to any form of bribery, extortion, fraud, or corruption and have established a robust supervision and reporting mechanism, encouraging employees and stakeholders to actively report violations. During the Reporting Period, we strictly adhered to the following laws and regulations related to integrity and developed a series of internal management policies:

法律法規及內部管理條例:	Laws, Regulations, and Internal Management Rules:
《中華人民共和國刑法》	The Criminal Law of the People's Republic of China
《中華人民共和國證券法》	The Securities Law of the People's Republic of China
《中華人民共和國公司法》	The Company Law of the People's Republic of China
《中華人民共和國反洗錢法》	The Anti-Money Laundering Law of the People's Republic of China
《中華人民共和國公職人員政務處分法》	The Law of the People's Republic of China on Administrative Punishment of Public Officials
《中國共產黨紀律檢查機關監督執紀工作 規則》	The Public Servants' Administrative Sanction Law of the People's Republic of China
香港《證券及期貨條例》	The Securities and Futures Ordinance of Hong Kong
香港《防止賄賂條例》	The Prevention of Bribery Ordinance of Hong Kong
《金融機構反洗錢規定》	The Anti-Money Laundering Regulations for Financial Institutions
《國有企業領導人員廉潔從業若干規定》	Several Provisions on the Integrity of State-owned Enterprise Leaders
《國有企業管理人員處分條例》	Regulations on Disciplinary Measures for State-owned Enterprise Management Personnel
《證券期貨經營機構及其工作人員廉潔從 業規定》	Provisions on the Professional Integrity of Securities and Futures Business Institutions and Their Employees

《合規行為準則》

《領導人員廉潔從業手冊》

《員工廉潔從業手冊》

《中國同輻反舞弊管理辦法》

《中國同輻海外反腐敗合規指引》

廉潔風險管理

為堅守道德操守的承諾,本集團將反腐敗 及反商業賄賂列為重點工作,並以《中國 同輻反舞弊管理辦法》為核心,構建了一 套系統且全面的內部廉潔風險防範制度體 系統體系涵蓋了從制度設計到執行監督 的各個環節。為強化反舞弊工作的日常監 個假設立了反舞弊工作常設機構,專 門負責理意見。該機構的設立旨在確保本集 團及員工的利益與聲譽免受損害,並為舉 報人提供安全、暢通的管道,鼓勵其積極 參與反腐敗工作。 Compliance Code of Conduct

Integrity Practice Manual for Leaders

Integrity Practice Manual for Employees

CIRC Anti-Fraud Management Measures

CIRC Overseas Anti-Corruption Compliance Guidelines

INTERNAL INTEGRITY RISK MANAGEMENT

To uphold our commitment to ethical conduct, the Group has prioritized anti-corruption and anti-commercial bribery efforts. With the CIRC Anti-Fraud Management Measures as our foundation, we have built a comprehensive internal integrity risk prevention system that covers all aspects from policy design to execution and oversight. To strengthen daily supervision of antifraud efforts, we have set up a permanent anti-fraud working body, responsible for receiving, investigating, reporting, and providing reasonable suggestions on fraud complaints. This system ensures that the interests and reputation of the Group and employees are protected, while also providing a secure, open channel for whistleblowers, encouraging them to actively participate in anti-corruption efforts.

本集團於報告期內系統化推進廉潔風險防 控工程,實施「警示教育+日常宣導+專項 治理」三位一體監督機制: In the Reporting Period, we systematically advanced our integrity risk prevention program, establishing an organizational system that integrates policies, culture, and oversight:

警示震懾體系 Improved Policy System	強化制度建設,健全完善權力清單,細化284個事項的決策程序,推進權力運行公開化、規 範化。織密紮緊制度的「籠子」,注重將廉潔風險防控與規範業務管理、完善內控建設深度 融合。深化以案施治,做好嚴肅查處違紀違規行為的「後半篇文章」,推動實施以案促改15 項具體措施,解決改善管理類問題284項,全面提升採購領域和貿易領域規範化管理,推動 各單位集中建立完善制度87項,從制度上有效剷除了腐敗滋生的土壤。 We intensified efforts to refine institutional frameworks by establishing a comprehensive
	authority catalog that clarifies decision-making procedures for 284 operational items, ensuring transparency and standardization in the exercise of power. By "tightening the institutional cage," CIRC has deeply integrated integrity risk prevention with standardized business management and robust internal control systems, embedding anti-corruption
	safeguards into daily operations. Leveraging lessons from disciplinary violations, the Group implemented 15 corrective measures to address root causes, resolving 284 management-related issues and enhancing standardized management in procurement and trade
	sectors. Additionally, subsidiaries collectively established 87 refined institutional protocols, systematically eliminating systemic vulnerabilities that could foster corruption.
長效預防機制 Integrity Culture Development	常態化開展日常廉潔提醒和形式多樣的廉潔文化宣傳活動,在元旦春節、五一端午等重要 時點及時發佈節前「紀」語,引導幹部職工時刻樹牢廉潔文化理念。召開警示教育大會,有 效發揮警示教育強震懾、固防線的作用,切實增強全體黨員幹部廉潔風險防範意識。廣泛 開展廉潔文化宣傳,各單位舉辦廉潔黨課50餘次,參觀廉潔教育基地40餘次,寄送廉潔家 書260餘份,員工自創廉潔作品300餘個。通過廉潔宣傳教育,把剛性的制度約束和柔性的 文化沁潤結合起來,進一步夯實員工廉潔從業的思想道德防線,在公司內部營造風清氣正 的良好氛圍。
	We regularly conducted integrity reminders and promoted integrity culture through various activities, publishing reminders during important times such as the New Year, Spring Festival, and Labor Day. We held educational conferences to raise awareness among all employees about preventing integrity risks. We also hosted more than 50 integrity lectures, visited more than 40 integrity education bases, sent over 260 letters on integrity, and created over 300 integrity works, reinforcing employees' ethical boundaries and fostering a positive internal atmosphere.
重點領域治理 Key Area Supervision	開展採購和工程建設領域專項整治,組織對近10年採購業務進行倒查覆盤,梳理完善合同 台賬15,193份,對8家重點單位進行現場檢查,督促指導各單位集中落實整改措施201項, 促進採購管理規範化水平有效提升。持續深化醫藥領域專項治理和集中整治,督促相關單 位進一步加強合規管理、深化銷售改革、加強服務商管控,從源頭上推動藥品流通規範管 理。面向全體員工開展違規經商辦企「再清理」行動,組織員工登記報備經商辦企情況,進 一步規範了員工經商辦企行為。 We carried out targeted inspections in procurement and construction, reviewing 10 years' worth of procurement operations and rectifying 201 issues across 8 key units. We also focused on the pharmaceutical sector, ensuring stronger compliance management and
	sales reforms, and encouraged employees to report any involvement in private business, tightening the management of commercial operations.

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此外,我們高度注重對重點人員與重點領 域的監督管理。在《中國同輻反舞弊管理 辦法》中,我們明確規定了高級經營管理 層在反舞弊工作中的職責與義務,確保領 導層以身作則,推動廉政文化的落地實 施。同時,在《合規行為準則》中,我們 對員工與醫療專業人士、醫療機構在藥品 推廣、醫學互動交流等活動中的反腐敗要 求進行了詳細規定,進一步規範相關行 為,杜絕任何形式的利益輸送與不正當交 易。 Additionally, we place a strong emphasis on supervision and management of key personnel and areas. The *CIRC Anti-Fraud Management Measures* clearly define the responsibilities and obligations of senior management in anti-fraud efforts, ensuring that leaders set an example and promote the implementation of integrity culture. We have also detailed anti-corruption rules for employees, healthcare professionals, and medical institutions in the *Compliance Code of Conduct* to prevent improper transactions and benefit transfer.

對舞弊行為追究的責任 Accountability for Fraud

領導責任		
Leadership	事件的發生,造成會計信息失真、隱瞞損失等應承擔的責任。	
Responsibility	Refers to the responsibility of management personnel with corresponding leadership authority for the occurrence of fraud incidents within their supervisory or managed scope due to negligence or oversight, resulting in distorted accounting information or concealed losses.	
直接責任 Direct Responsibility	指管理人員及其相關人員在其職責範圍內,直接操作或參與相關決策,或授意、指 使、強令、縱容、包庇他人等舞弊以及未正確履行職責等過失行為,造成會計信息 失真、隱瞞損失等應承擔的責任。	
	Refers to the responsibility of management personnel and related personnel within their duty scope, directly involved in operations or decision-making, or instructing, ordering, coercing, condoning, or covering up others' fraudulent actions, or failing to perform their duties correctly, resulting in distorted accounting information or concealed losses.	
本集團於報告期內持續完善廉潔風險防控 機制,從制度建設、教育宣導與業務治理 三維度強化合規管理。制度層面修訂完善 《收受禮品登記管理細則》等規範性文件, 構建常態化監管框架;通過典型案例剖析 開展沉浸式警示教育,組織專項治理行動 以淨化經營生態。業務管控方面深化營銷 體系改革,建立服務商分級管理制度與動 態評估機制,完善藥品流通環節的陽光採 購流程,從源頭壓縮違規操作空間。同步 強化監督問責機制,暢通問題線索反映渠 道,全年開展多場廉潔從業專題宣導會, 將反腐案例編入常態化培訓教材,持續鞏 固「不敢腐、不能腐、不想腐」的長效機 制。

我們針對跨境經營反腐敗治理實施專項制 度建設,制定《海外反腐敗合規指引》作 為境外業務合規操作綱領性文件。該指引 系統性規範商業賄賂風險識別、調查、審 批等關鍵流程,顯著強化合規風險的前置 識別與動態防控效能,有效建立符合國際 反腐敗合規標準的管理框架。

During the Reporting Period, the Group continuously refined its anti-corruption risk prevention mechanisms, strengthening compliance management across three dimensions: institutional development, education, and operational governance. Institutionally, it updated regulatory documents such as the Gift Registration Management Rules to establish a regularized oversight framework. In terms of business control, the Group has deepened the reform of its marketing system, established a hierarchical management system for service providers and a dynamic assessment mechanism, and improved the sunshine procurement process in the circulation of medicines, so as to compress the space for irregular operation at the source. The Group has also strengthened the supervision and accountability mechanism, opened up channels for reflecting problematic clues, conducted a number of thematic awareness-raising sessions on clean practices throughout the year, and incorporated anti-corruption cases into regular training materials, so as to continuously consolidate the long-term mechanism of "not daring to rot, not being able to rot, and not wanting to rot".

We implemented specialized policies for cross-border anticorruption governance and established the *Overseas Anti-Corruption Compliance Guidelines* to systematize the identification, investigation, and approval processes for commercial bribery risks. This approach strengthened preemptive risk identification and dynamic control, establishing a management framework that meets international anti-corruption compliance standards.

廉潔舉報渠道

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為確保反舞弊工作的落實,中國同輻制定 並於本年度修訂《信訪舉報與問題線索管 理細則》等制度,從機制設計、流程管控 與權責劃分三維度完善內控體系。在檢舉 信息接收方面,我們建立「熱線+信訪+現 場受理|多維舉報通道,暢通信訪舉報渠 道,設置公開舉報電話,按流程受理、處 置檢舉控告、問題線索,嚴肅開展監督執 紀問責。此外,我們亦確保全體黨員幹 部、職工群眾均可以通過上述及其他渠道 反映涉及集團有關人員 [賄賂、勒索、欺 詐、洗黑錢|等問題或情況,並對檢舉渠 道進行公開公示。同時嚴密保護舉報人信 息及舉報內容,確保能夠以暢通並保障相 關人員的方式收集各方反映的違反職業道 德和損害雙方利益等問題的檢舉。

REPORTING CHANNELS

To ensure the effective implementation of anti-fraud efforts, CIRC has developed and revised the Complaint Reporting and Issue Management Rules. These rules enhance the internal control system in three dimensions: mechanism design, process control, and responsibility allocation. We have established a multichannel reporting system that includes hotlines, complaint reception, and on-site processing, ensuring that any violations such as bribery, extortion, fraud, or money laundering can be reported securely. In addition, we also ensure that all party members, cadres, employees and the general public can reflect issues or situations involving "bribery, extortion, fraud and money laundering" of the Group's relevant personnel through the above and other channels, and that the channels for reporting are openly publicized. At the same time, the Group strictly protects the informant's information and the content of the reporting, and ensures that reported contents on issues such as violation of professional ethics and jeopardizing the interests of both parties are collected in a manner that is accessible and protects the relevant personnel.

對於收到的舉報信息,本集團進行分類處 理和認真審查後,參考規章制度進行問責 或上報處理。紀委收到信訪舉報後,會對 信訪件進行研判,對屬於紀檢業務範圍內 的信訪件按要求進行受理;受理舉報後, 本集團紀委依據監督執紀相關制度,開展 核查工作,發現相關責任人員確有違紀、 職務違法、職務犯罪等問題,根據相關規 定及流程,追究相應人員紀法責任。對於 確認違反內部制度的員工,將按照違反工 作或組織紀律進行處理;對於觸犯法律的 員工,則移交司法機關依法處理。

於報告期內,本集團未有接獲任何與賄 賂、勒索、欺詐及洗黑錢相關的違法違規 事件,亦未有任何重大違反與反貪污有關 的法律法規的情況或已審結的貪污訴訟案 件。

廉潔教育

為深化集團內部廉潔文化建設,我們持續 強化各層級員工的廉潔意識,透過多元化 的教育培訓與宣導活動,全面營造崇廉尚 潔的企業氛圍。我們編製了《廉潔從業電 子手冊》,該手冊不僅為幹部職工提供了 便捷且精準的廉潔從業指引,更成為日常 工作中的重要參考工具。本年度,我們針 對業務領域中常見的風險點及合規管理需 求,精心設計並實施了一系列專題教育課 程,並充分利用辦公自動化系統及定期培 訓等管道,廣泛宣傳反舞弊政策與具體措 施,確保廉潔教育覆蓋至每一位員工。 Upon receiving reports, the Group conducts thorough classification and review of the information, followed by accountability actions or escalation in accordance with internal regulations. When the Discipline Inspection Commission receives a report, it first evaluates the case's scope. For matters falling under disciplinary oversight, the Commission initiates an investigation per established procedures. If verified violations – such as disciplinary breaches, occupational violations, or occupational crimes – are identified, the responsible individuals face disciplinary or legal consequences based on the severity of misconduct. Employees found violating internal policies are sanctioned under organizational or operational discipline, while those implicated in criminal acts are referred to judicial authorities.

During the Reporting Period, the Group did not receive any substantiated cases related to bribery, extortion, fraud, money laundering, or other illegal activities. There were no significant violations of anti-corruption laws or concluded corruption-related litigation.

INTEGRITY EDUCATION

To strengthen the internal culture of integrity, the Group has intensified efforts to raise awareness of ethical practices among employees at all levels. Through diversified training programs and awareness campaigns, CIRC fosters an enterprise-wide atmosphere that prioritizes integrity and rejects corruption. The E-Handbook on Integrity in Professional Conduct was developed as a practical and accessible guide for employees, serving as a daily reference tool to navigate ethical dilemmas. During the Reporting Period, tailored educational modules were designed and delivered to address common risk points and compliance needs across business units. Leveraging platforms such as office automation systems and regular training sessions, the Group disseminated anti-fraud policies and specific measures comprehensively, ensuring a full coverage of integrity education for all employees.

案例:強化董事及全體員工廉潔教育

Case: Strengthening Integrity Education for Directors and Employees

2024年12月30日,本集團召開2024年警示教育大會,通過深入分析了全面從嚴治黨的嚴峻形勢,教育 引導全體黨員幹部以案為鑒、盤點反思。本部及各成員單位領導班子成員,中層幹部,紀檢、審計、財 務、採購、銷售、項目管理等相關部門全體人員700餘人參加會議,協同推動中國同輻政治生態向善向 好,為決戰決勝「十四五」規劃目標任務凝聚力量。

On December 30, 2024, CIRC convened its 2024 Integrity Warning Conference, delivering an indepth analysis of the rigorous requirements for the strict governance of the Party and urging all Party members and cadres to reflect on disciplinary cases as cautionary lessons. Over 700 participants attended, including leadership teams from headquarters and subsidiaries, mid-level managers, and staff from key departments such as discipline inspection, auditing, finance, procurement, sales, and project management. The conference underscored CIRC's commitment to jointly advancing a healthy political ecosystem and consolidating efforts to achieve the goals outlined in the 14th Five-Year Plan.



中國同輻2024年警示教育大會 CIRC 2024 Integrity Warning Conference

案例:「明鏡昭廉」反貪尚廉歷史學習

Case: Historical Integrity Education at the "Mingjing Zhaolian" Anti-Corruption Cultural Park

2024年5月30日,中國同輻組織全系統紀檢幹部、本部全體黨員赴「明鏡昭廉」反貪尚廉歷史文化園開展 警示教育學習。全體培訓人員依次參觀了明代反貪尚廉歷史陳列館、明代清官廉史展覽館、海瑞事蹟展 館,深入了解明代反貪、懲貪、治貪的思想、實踐和經驗教訓。通過對嚴嵩案、魏忠賢案等明代典型貪 腐案的剖析以及對海瑞、于謙等諸多明代清吏事蹟的學習,全體黨員深切領會了「廉則興、貪則衰」的歷 史鐵律。

On May 30, 2024, the Party Committee of CIRC organized an integrity warning education session at the Mingjing Zhaolian Anti-Corruption and Integrity-Promoting Historical Park for all discipline inspection officials and Party members from its headquarters. Participants toured key exhibits, including the Ming Dynasty Anti-Corruption History Hall, the Ming Dynasty Honest Officials Exhibition, and the Hai Rui Memorial Hall, gaining deep insights into the Ming Dynasty's philosophies, practices, and lessons in combating corruption, punishing graft, and institutionalizing integrity governance. Through analyzing historical cases such as the Yan Song and Wei Zhongxian corruption scandals, as well as studying the deeds of incorruptible officials like Hai Rui and Yu Qian, attendees internalized the timeless principle: "Integrity ensures prosperity; corruption leads to decline."



中國同輻「明鏡昭廉」反貪尚廉歷史文化園警示教育學習 CIRC Warning Education and Learning: Historical Integrity Education at the "Mingjing Zhaolian" Anti-Corruption Cultural Park

投資者關係管理

我們堅信,與股東保持有效溝通對加強投 資者關係及投資者對本集團業務表現及策 略的理解至為重要。2024年,中國同輻 從以下幾個方面開展投資者關係管理工 作:

- 本公司高度重視信息披露工作,按 照強制性披露與自願性披露相結合 的原則,確保信息披露的針對性和 有效性。2024年,本公司共完成 100項公告披露,其中包括88項強 制性公告和12項自願性公告,讓投 資者及時掌握生產經營最新情況, 為投資決策做支撐。
- 通過2023年度業績發佈會、深圳
 反向路演活動、投資者交流會、投資者現場調研等多途徑多形式保持
 與投資者的及時、深入和廣泛的溝通,積極回應投資者關切。
- 在週年股東會及臨時股東會上,保 持與股東之間持續對話。
- 在綜合考慮戰略發展目標、經營規 劃、盈利能力、現金流量狀況以及 外部融資環境等多種因素基礎上, 在完成2023年度分紅後,本公司 還實施了2024年中期分紅,充分 展現了「回報社會,以投資者為 本,讓投資者充分共享本公司發展 成果」的上市公司「優等生」形象, 以實際行動增強投資者回報。

2024年,共舉辦業績發佈會2次及反向 路演活動1次;邀請中金證券、中信証 券、瑞銀基金等機構,開展投資者調研11 次,接待投資者55人。

INVESTOR RELATIONS MANAGEMENT

We believe that maintaining effective communication with shareholders is essential for strengthening investor relations and enhancing their understanding of the Group's performance and strategy. In 2024, China Nuclear Radiations carried out the following activities in investor relations management:

- The Company prioritizes robust information disclosure practices, adhering to a dual framework of mandatory and voluntary disclosures to ensure relevance and effectiveness. In 2024, CIRC issued 100 public announcements, including 88 mandatory filings and 12 voluntary disclosures, enabling investors to stay informed about operational developments and make data-driven decisions.
 - Through diverse platforms such as the 2023 Annual Results Presentation, Shenzhen Reverse Roadshow, Investor Communication Forums, and on-site investor research sessions, the Group maintained timely, in-depth, and inclusive dialogue with stakeholders, proactively addressing investor concerns.
- Continuous engagement with shareholders was upheld during both the Annual General Meeting and Extraordinary General Meetings, fostering transparency and alignment with shareholder interests.
- Balancing strategic objectives, operational plans, profitability, cash flow dynamics, and external financing conditions, the Company distributed 2023 annual dividends and further implemented a 2024 interim dividend. This dual action underscores CIRC's commitment to its role as a "model listed company" – dedicated to social responsibility, investor-centric values, and ensuring shareholders share equitably in its growth.

In 2024, we conducted 2 earnings release meetings and 1 reverse roadshow event, invited institutions like China International Capital Corporation (CICC), CITIC Securities, and UBS Fund for 11 investor research sessions, and hosted 55 investors.

案例[:]中國同輻2024年度第二次業績説明會 Case: CIRC 2024 Second Earning Release Meeting



中國同輻2024年度第二次業績説明會現場 The Site of CIRC 2024 Second Earning Release Meeting

案例:中國同輻2024年度反向路演 Case: CIRC 2024 Reverse Roadshow Event



中國同輻2024年度反向路演現場 The Site of CIRC 2024 Reverse Roadshow Event

中國同輻股份有限公司 CHINA ISOTOPE & RADIATION CORPORATION

合規立本,智治增效 (續) COMPLIANCE AS THE FOUNDATION, INTELLIGENT GOVERNANCE FOR EFFICIENCY (CONTINUED)

案例:日常招待投資者 Case: Daily Hospitality for Investors



招待投資者現場 Hosting Investors On-site

股東亦可通過電話、電子郵件或傳真等方 式向本公司提出詢問和問題,有關聯絡資 料載於本報告「報告獲取」章節及本公司 網站。

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Shareholders may also address their inquiries and questions to the Company by telephone, e-mail or facsimile, and the relevant contact information is set out in the section headed "Access to the Report" of the Report and on the Company's website.

附錄 APPENDICES

《環境、社會及管治報告指引》條 ENVIRONMENTAL, SOCIAL AND GOVERNANCE 文索引 **REPORTING GUIDE CONTENT INDEX** 層面 內容 相關章節 Aspect Content **Relevant Section** 管治 Governance 管治架構 由董事會發出的聲明,當中載有下列內容: ESG管治架構 Governance Structure A statement from the Board containing: ESG Governance Framework (i) 披露董事會對環境、社會及管治事宜的監管; (i) Disclose the Board's oversight of ESG issues; (ii) 董事會的環境、社會及管治管理方針及策略,包括 評估、優次排列及管理重要的環境、社會及管治相 關事宜(包括對發行人業務的風險)的過程;及 (ii) the Board's ESG management approach and strategy, including the process of evaluating, prioritizing and managing material ESG-related issues (including risks to the issuer's business); and (iii) 董事會如何按環境、社會及管治相關目標檢討進 度,並解釋它們如何與發行人業務有關連。 (iii) how the Board reviews progress against ESG related objectives and explains how they relate to the issuer's business. 匯報原則 描述或解釋在編備環境、社會及管治報告時如何應用下 編製基準 **Reporting Principles** 列匯報原則 Reporting Guideline Describe or explain how the following reporting principles are applied in preparing the ESG Report 匯報範圍 解釋環境、社會及管治報告的匯報範圍,及描述挑選哪 報告範圍 **Reporting Scope** 些實體或業務納入環境、社會及管治報告的過程。若匯 Reporting Scope 報範圍有所改變,發行人應解釋不同之處及變動原因 An explanation of the reporting scope of the ESG Report and a description of how the entities or businesses are selected for inclusion in the ESG Report. If the scope of the report changes, the issuer should explain the differences and the reasons for the changes

主要範疇	內容	相關章節
Aspect	Content	Relevant Section
A.環境		
A. Environmental		
A1排放物		
A1 Emissions	左關威与五四宗与赙排故 白水五上地的排法 左字五	今半唱符公司
一般披露 General Disclosure	有關廢氣及溫室氣體排放、向水及土地的排污、有害及 無害廢棄物的產生等的:	元音琅境官哇 Improving Environmental
General Disclosure	無古魔朱初明座工寺町 Relating to air and greenhouse gas emissions,	
	discharges into water and land, and generation of	
	hazardous and non-hazardous waste:	Strengthening Pollution
		Prevention and Control
	(a) 政策;及	
	(a) the policies; and	
	(b) 遵守對發行人有重大影響的相關法律及規例的資料	
	(b) compliance with relevant laws and regulations that	
	have a significant impact on the issuer	
A1.1	排放物種類及相關排放數據。	環境表現概覽
A1 0	The types of emissions and respective emissions data 直接(範圍1)及能源間接(範圍2)溫室氣體排放量及密	Overview of Environmental
A1.2	且按(靴車I) 及能标间按(靴車Z) 血至粘胞排放重及笛 度	Performance
	Direct (Scope 1) and energy indirect (Scope 2)	
	greenhouse gas emissions and intensity	據因涉及保密研發單位無
A1.3	所產生有害廢棄物總量及密度	法統計,或產生量較小,
	Total hazardous waste produced and intensity	不在本年度報告中進行單
A1.4	所產生無害廢棄物總量及密度	獨披露
	Total non-hazardous waste produced and intensity	Some hazardous and
		non-hazardous waste
		data are not separately
		disclosed in this ESG
		report as they cannot
		be counted by the confidential research
		and development unit or
		are generated in small
		quantities
 A1.5	描述所訂立的排放目標及為達到這些目標所採取的步驟	
	Description of emission target(s) set and steps taken to	
	achieve them	Governance Goals
A1.6	描述處理有害及無害廢棄物的方法,及描述所訂立的減	加強污染防治
	廢目標及為達到這些目標所採取的步驟	Strengthening Pollution
	Description of how hazardous and non-hazardous	Prevention and Control
	wastes are handled, and a description of reduction	
	target (s) set and steps taken to achieve them	

主要範疇	內容	相關章節
Aspect	Content	Relevant Section
A2資源使用		
A2 Use of Resources		
一般披露	有效使用資源(包括能源、水及其他材料原材料)的政策	
General Disclosure	Policies on the efficient use of resources, including energy, water and raw materials of other materials	Efficient Resource Use
A2.1	按類型劃分的直接及/或間接能源總耗量及密度	環境表現概覽
	Direct and/or indirect energy consumption by type in	
A O O	total and intensity 總耗水量及密度	Performance
A2.2	總紀小里汉省反 Water consumption in total and intensity	
A2.3	描述所訂立的能源使用效益目標及為達到這些目標所採	
A2.0	田述///可立切能///文冊/X曲日///文為建到道至日/////// 取的步驟	報況加生日标 Environmental
	Description of energy use efficiency target(s) set and	
	steps taken to achieve them	高效資源利用
A2.4	描述求取適用水源上可有任何問題,以及所訂立的用水	Efficient Resource Use
	效益目標及為達到這些目標所採取的步驟	
	Description of whether there is any issue in sourcing	
	water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them	
		T===
A2.5	製成品所用包裝材料的總量及每生產單位佔量 Total packaging material used for finished products and	環境表現概覽 Overview of
	with reference to per unit produced	Environmental
		Performance
A3環境及天然資源		
A3 The Environment a	and	
Natural Resources		
		古盐浓烟和山田
一般披露	減低發行人對環境及天然資源造成重大影響的政策	高效資源利用
	Policies on minimising the issuer's significant impact on	
一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources	
一般披露	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管	
一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動	
一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管	
一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the	
一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken	
一般披露 General Disclosure A3.1	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken	
一般披露 General Disclosure A3.1 A4氣候變化	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken	Efficient Resource Use
一般披露 General Disclosure A3.1 A4氣候變化 A4 Climate Change	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them 識別及應對已經及可能會對發行人產生影響的重大氣候 相關事宜的政策	Efficient Resource Use 應對氣候變化 Addressing Climate
一般披露 General Disclosure A3.1 A4氣候變化 A4 Climate Change 一般披露	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them 識別及應對已經及可能會對發行人產生影響的重大氣候 相關事宜的政策 Policies on identification and mitigation of significant	Efficient Resource Use 應對氣候變化 Addressing Climate
一般披露 General Disclosure A3.1 A4氣候變化 A4 Climate Change 一般披露	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them 識別及應對已經及可能會對發行人產生影響的重大氣候 相關事宜的政策 Policies on identification and mitigation of significant climate-related issues which have impacted, and those	Efficient Resource Use 應對氣候變化 Addressing Climate
一般披露 General Disclosure A3.1 A4氣候變化 A4 Climate Change 一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them 識別及應對已經及可能會對發行人產生影響的重大氣候 相關事宜的政策 Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer	Efficient Resource Use 應對氣候變化 Addressing Climate
一般披露 General Disclosure A3.1 A4氣候變化 A4 Climate Change 一般披露	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them 識別及應對已經及可能會對發行人產生影響的重大氣候 相關事宜的政策 Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer 描述已經及可能會對發行人產生影響的重大氣候相關事	Efficient Resource Use 應對氣候變化 Addressing Climate
一般披露 General Disclosure A3.1 A4氣候變化 A4 Climate Change 一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them 識別及應對已經及可能會對發行人產生影響的重大氣候 相關事宜的政策 Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer 描述已經及可能會對發行人產生影響的重大氣候相關事 宜,及應對行動	Efficient Resource Use 應對氣候變化 Addressing Climate
一般披露 General Disclosure A3.1 A4氣候變化 A4 Climate Change 一般披露 General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources 描述業務活動對環境及天然資源的重大影響及已採取管 理有關影響的行動 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them 識別及應對已經及可能會對發行人產生影響的重大氣候 相關事宜的政策 Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer 描述已經及可能會對發行人產生影響的重大氣候相關事	Efficient Resource Use 應對氣候變化 Addressing Climate

主要範疇	內容	相關章節
Aspect	Content	Relevant Section
B.社會 B. Social B1僱傭 B1 Employment		
一般披露 General Disclosure	有關薪酬及解僱、招聘及晉升、工作時數、假期、平等 機會、多元化、反歧視以及其他待遇及福利的: Relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare:	Employee Care and Shared Prosperity 保障員工權益
	(a) 政策;及 (a) the policies; and	
	(b) 遵守對發行人有重大影響的相關法律及規例的資料(b) compliance with relevant laws and regulations that have a significant impact on the issuer	
B1.1	按性別、僱傭類型、年齡組別及地區劃分的僱員總數 Total workforce by gender, employment type, age group and geographical region	
B1.2	按性別、年齡組別及地區劃分的僱員流失比率 Employee turnover rate by gender, age group and geographical region	
B2健康及安全		
B2 Health and Safety		
一般披露 General Disclosure	有關提供安全工作環境及保障僱員避免職業性危害的: Information relating to providing a safe working environment and protecting employees from occupational hazards:	Prosperity 打造安心工作環境 Creating a Safe Working
	(a) 政策;及 (a) the policies; and	Environment
	(b) 遵守對發行人有重大影響的相關法律及規例的資料(b) compliance with relevant laws and regulations that have a significant impact on the issuer	
B2.1	過去三年(包括匯報年度)每年因工亡故的人數及比率 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year	
B2.2	因工傷損失工作日數 Lost days due to work injury	
B2.3	描述所採納的職業健康與安全措施,以及相關執行及監 察方法	
	Description of occupational health and safety measures adopted, how they are implemented and monitored	

主要範疇	內容	相關章節
Aspect	Content	Relevant Section
B3發展及培訓		
B3 Development and		
Training		
一般披露	有關提升僱員履行工作職責的知識及技能的政策;描述	加速職業發展
General Disclosure	培訓活動	Accelerating Career
	Policies on improving employees' knowledge and skills	Development
	for discharging duties at work; description of training	
	activities	
B3.1	按性別及僱員類別劃分的受訓僱員百分比	
	The percentage of employees trained by gender and	
	employee category	
B3.2	按性別及僱員類別劃分,每名僱員完成受訓的平均時數	
	The average training hours completed per employee by	
	gender and employee category	
B4勞工準則		
B4 Labour Standards		
一般披露	有關防止童工或強制勞工的:	保障員工權益
General Disclosure	Relating to preventing child and forced labour:	Employee Rights Protection
	(a) 政策;及	
	(a) the policies; and	
	(b) 遵守對發行人有重大影響的相關法律及規例的資料	
	(b) compliance with relevant laws and regulations that have a significant impact on the issuer	
B4.1	描述檢討招聘慣例的措施以避免童工及強制勞工	
	Description of measures to review employment practices	
	to avoid child and forced labour	
B4.2	描述在發現違規情況時消除有關情況所採取的步驟	
	Description of steps taken to eliminate such practices	
	when discovered	

主要範疇	內容	相關章節
Aspect	Content	Relevant Section
B5供應鏈管理		
B5 Supply Chain		
Management		
一般披露	管理供應鏈的環境及社會風險政策	精進供應鏈管理
General Disclosure	Policies on managing environmental and social risks of	Enhancing Supply Chain
	the supply chain	Management
B5.1	按地區劃分的供應商數目	
	Number of suppliers by geographical region	
B5.2	描述有關聘用供應商的慣例,向其執行有關慣例的供應	
	商數目,以及相關執行及監察方法	
	Description of practices relating to engaging suppliers,	
	number of suppliers where the practices are being	
	implemented, how they are implemented and monitored	
B5.3	描述有關識別供應鏈每個環節的環境及社會風險的慣	
	例,以及相關執行及監察方法	
	Description of practices used to identify environmental	
	and social risks along the supply chain, and how they	
	are implemented and monitored	
B5.4	描述在揀選供應商時促使多用環保產品及服務的慣例,	
	以及相關執行及監察方法	
	Description of practices used to promote environmentally	
	preferable products and services when selecting	
	suppliers, and how they are implemented and monitored	

主要範疇	内容	相關章節
Aspect	Content	Relevant Section
B6產品責任		
B6 Product		
Responsibility	七期矿相供文口和叩波从冲向的穴入 府生 植体卫利	取住穴入生文
一般披露 General Disclosure	有關所提供產品和服務的健康與安全、廣告、標籤及私 隱事宜以及補救方法的:	衆馬女主生産 Focusing on Safe
General Disclosure	局中且以及而效力/公司。 Information relating to health and safety, advertising,	0
	labeling and privacy matters relating to products and	
	services provided and methods of redress:	Focusing on Product
		Quality
	(a) 政策;及	優化客戶體驗
	(a) the policies; and	Optimizing Customer
		Experience
	(b) 遵守對發行人有重大影響的相關法律及規例的資料	
	(b) compliance with relevant laws and regulations that	
	have a significant impact on the issuer	
B6.1	已售或運送產品總數中因安全與健康理由而須回收的百	注重產品質量
	分比	Focusing on Product
	Percentage of total products sold or shipped subject to recalls for safety and health reasons	Quality
B6.2	接獲關於產品及服務的投訴數目以及應對方法	優化客戶體驗
	Description of practices relating to observing and	Optimizing Customer
	protecting intellectual property rights	Experience
B6.3	描述與維護及保障知識產權有關的慣例	科技創新研發
	Description of practices relating to observing and	Research and Development
	protecting intellectual property rights	in Technological Innovation
B6.4	描述質量檢定過程及產品回收程序	注重產品質量
	Description of quality assurance process and recall	-
	procedures	Quality
B6.5	描述消費者數據保障及私隱政策,以及相關執行及監察	優化客戶體驗
	方法	Optimizing Customer
	Description of consumer data protection and privacy policies, how they are implemented and monitored	Experience

主要範疇 Aspect	內容 Content	相關章節 Relevant Section
 B7反貪污		
B7 Anti-corruption		
一般披露	有關防止賄賂、勒索、欺詐及洗黑錢的:	關注清廉經營
General Disclosure	Relating to bribery, extortion, fraud and money	Focus on Integrity in
	laundering:	Operations
	(a) 政策;及	
	(a) the policies; and	
	(b) 遵守對發行人有重大影響的相關法律及規例的資料	
	(b) compliance with relevant laws and regulations that	
	have a significant impact on the issuer	
B7.1	於匯報期內對發行人或其僱員提出並已審結的貪污訴訟	
	案件的數目及訴訟結果	
	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	
B7.2	描述防範措施及舉報程序,以及相關執行及監察方法	
	Description of preventive measures and whistleblowing	
	procedures, how they are implemented and monitored	
B7.3	描述向董事及員工提供的反貪污培訓	
	Description of anti-corruption training provided to	
	directors and employees	
B8社區投資		
B8 Community		
一般披露	有關以社區參與來了解營運所在社區需要和確保其業務	
General Disclosure	活動會考慮社區利益的政策	Building a Better Society
	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	
B8.1	專注貢獻範疇	
	Focus areas of contribution	
B8.2	在專注範疇所動用資源	
	Resources contributed to the focus area	

《央企控股上市公司ESG專項報告 參考指標體系》條文索引 SYSTEM FOR ESG REPORTS OF LISTED COMPANIES CONTROLLED BY CENTRAL ENTERPRISES

披露內容	相關章節/備註
Disclosure	Related Chapters/Remarks
	關於本報告
Basic Corporate and Reporting Information	About This Report
ESG管理	ESG管治架構
ESG Management ESG	ESG Governance Framework
ESG風險與機遇	ESG風險管理
ESG Risks and Opportunities	ESG Risk Management
利益相關方溝通	ESG實質性議題管理及利益相關方溝通
Stakeholder Communication	Material ESG Topic Management and Stakeholder
	Communication

實質性議題評估 Materiality Assessment

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			相關章節/備註
	披露內容		Related Chapters/
	Disclosure		Remarks
環境範疇指標			
Environmental			
Category			
Indicators			
一級指標	二級指標	三級指標	
Level 1 Indicators	Level 2 Indicators	Level 3 Indicators	
		新鮮用水量	完善環境管理
		Fresh Water Withdrawal	Improving Environmental
		循環用水量	Management
	业次运	Recycled Water	高效資源利用
	水資源 Water Resource	Consumption 循環水用量佔比	Efficient Resource Use 環境表現概覽
	Water nesource	循環小用重加比 Percentage of Recycled	吸究衣斑佩見 Overview of Environmental
		Water	Performance
		水資源消耗強度	r chormanoc
		Water Consumption Intensity	
		不可再生物料消耗量	
		Non-renewable Material	
		Consumption Packaging	高效資源利用
		Materials Waste	同双頁/标刊用 Efficient Resource Use
	物料	有毒有害物料消耗量	環境表現概覽
資源消耗	Material	Toxic/Hazardous Material	Overview of Environmental
Resource		Consumption	Performance
Consumption		物料消耗強度	
		Material Consumption	
		Intensity ルズ 水 海波 括号	
		化石能源消耗量	高效資源利用
		Fossil Energy Consumption 能源消耗總量	同双頁/标刊用 Efficient Resource Use
	能源	Total Energy Consumption	環境表現概覽
	Energy	能源消耗強度	Overview of Environmental
		Energy Consumption	Performance
		Intensity	
		包裝材料使用量	完善環境管理
		Packaging materials Used	Improving Environmental
	包裝材料	包裝材料輕量化減量化	Management
	Packaging materials	Packaging Material	環境表現概覽
		Lightweight Reduction	Overview of Environmental
			Performance

中国支佐 / 供补

	披露內容 Disclosure		相關章節/備註 Related Chapters/ Remarks
	廢水 Wastewater	廢水排放達標情況 Compliance Status of Wastewater Discharge 廢水管理與減排措施 Wastewater Management & Emission Reduction Measures 廢水排放量 Wastewater Discharge Volume 廢水污染物 Wastewater Pollutants 廢水污染物排放濃度 Wastewater Pollutant Discharge Concentration	加強污染防治 Strengthening Pollution Prevention and Control 環境表現概覽 Overview of Environmental Performance
污染防治 Pollution Prevention and Control	廢氣 Exhaust Gas	廢氣排放達標情況 Compliance Status of Exhaust Gas Emissions 廢氣污染物排放量 Exhaust Gas Pollutant Emissions 廢氣污染物排放濃度 Exhaust Gas Pollutant Emission Concentration 固體廢物處置合規情況 Compliance Status of Solid	加強污染防治 Strengthening Pollution Prevention and Control 環境表現概覽 Overview of Environmental Performance
	固體廢物 Solid Waste	Waste Disposal 一般工業固廢管理 General Industrial Waste Management 一般工業固廢處置量 Disposal Volume of General Industrial Waste 危險廢物處置量 Disposal Volume of Hazardous Waste	加強污染防治 Strengthening Pollution Prevention and Control 環境表現概覽 Overview of Environmental Performance

	披露內容 Disclosure		相關章節/備註 Related Chapters/ Remarks
氣候變化 Climate Change	溫室氣體排放 Greenhouse Gas Emissions 減排管理 Emission Reduction Management 氣候風險管理 Climate Risk Management	 溫室氣體來源於類型 Sources & Types of GHG Emissions 溫室氣體排放管理 GHG Emission Management 範圍一至範圍三排放 Scope 1-3 Emissions 溫室氣體排放強度 GHG Emission Intensity 溫室氣體減排管理 GHG Emission Reduction Management 氣候風險管理 Climate Risk Management 	應對氣候變化 Addressing Climate Change 環境表現概覽 Overview of Environmental Performance
生物多樣性 Biodiversity	生產、服務和產品對生物多 樣性的影響 Impacts of Production, Services & Products on Biodiversity & Mitigation	生產、服務和產品對生物多 樣性的影響 Impacts of Production, Services & Products on Biodiversity & Mitigation	共建生態文明 Co-Building Ecological Civilization

			相關章節/備註
	披露內容		Related Chapters/
	Disclosure		Remarks
	低碳發展目標制定與戰略措施 Low-Carbon Development	低碳發展目標制定與戰略措施 Low-Carbon Development	
	Targets & Strategies	Targets & Strategies 水資源管理	
	資源管理措施 Resource Management Measures	Water Resource Management 物料使用管理 Material Usage Management 能源使用與節能管理	高效資源利用 Efficient Resource Use
		Energy Usage & Energy- Saving Management	
資源與環境管理 制度措施		清潔生產 Clean Production 綠色技改及循環利用	高效資源利用 Efficient Resource Use 加強污染防治
Resource & Environmental Management Systems & Measures	綠色環保行動與措施 Green Environmental	Green Technology Upgrades & Circular Utilisation	Strengthening Pollution Prevention and Control
	Initiatives & Measures	綠色辦公和運營 Green Office and Operations 綠色採購與綠色供應鏈管理	高效資源利用 Efficient Resource Use 精進供應鏈管理
	綠色低碳認證	Green Procurement & Green Supply Chain Management 環保管理體係認證	Enhancing Supply Chain Management 完善環境管理
	Green & Low-Carbon Certifications	Environmental Management System Certification 發生突發環境事件應急預案	Improving Environmental Management 聚焦安全生產
	環境領域合法合規	Emergency Plans for Sudden Environmental Incidents	Focusing on Safe Production
	Environmental Compliance	環境領域違法違規事件 Non-Compliance Incidents in Environmental Areas	完善環境管理 Improving Environmental Management

	披露內容 Disclosure		相關章節/備註 Related Chapters/ Remarks
社會範疇指標 Social Category Indicators			
一級指標	二級指標	三級指標	
Level 1 Indicators		Level 3 Indicators 企業招聘政策及執行情況 Recruitment Policies & Implementation 員工結構 Employee Demographics 避免僱傭童工或強制勞動	
		Child & Forced Labour Prevention 薪酬理念與政策 Compensation Philosophy & Policies 工作時間和休息休假	員工關愛共榮 Employee Care and Shared Prosperity 保障員工權益
	員工薪酬與福利 Employee Compensation and Benefits	Working Hours & Leave Policies 薪酬福利保障政策 Compensation & Welfare Guarantees 員工民主管理 Democratic Management of	Employee Rights Protection
員工權益 Employee Rights and Benefits	員工健康與安全 Employee Health and Safety	Employees 員工職業健康安全管理 Occupational Health & Safety Management 員工安全風險防控 Safety Risk Prevention 安全事故及工傷應對 Work-Related Accident Response	員工關愛共榮 Employee Care and Shared Prosperity 打造安心工作環境 Creating a Safe Working Environment
		員工關愛與幫扶 Employee Care & Support 員工激勵及晉升政策 Incentive & Promotion Policies	重視員工關懷 Employee Welfare Focus 員工關愛共榮 Employee Care and Shared
	員工發展與培訓 Employee Development and Training	員工教育與培訓 Education & Training Programs 員工職業規劃及職業變動支 持 Career Planning & Transition	Prosperity 保障員工權益 Employee Rights Protectior 加速職業發展 Accelerating Career Development
	員工滿意度 Employee Satisfaction	Support 員工滿意度調查 Employee Satisfaction Survey 勞動糾紛 Labour Disputes 員工流動情況 Employee Turnover	員工關愛共榮 Employee Care and Shared Prosperity 保障員工權益 Employee Rights Protection

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	披露內容 Disclosure		相關章節/備註 Related Chapters/ Remarks
		生產規範管理政策及措施 Production Compliance Policies & Measures 質量管理	
	產品安全與品質 Product Safety and Quality	Quality Management 產品召回與撤回 Product Recall & Withdrawal 產品或服務負面事件 Negative Events for Products or Services 客戶滿意度	注重產品質量 Focusing on Product Quality
產品與服務管理 Product and Service Management	客戶服務與權益 Customer Service and Rights	Customer Satisfaction 客戶投訴及處理情況 Customer Complaints & Resolution 客戶信息及隱私保護 Customer Data Privacy 研發與創新管理體系	優化客戶體驗 Optimizing Customer Experience
	創新發展 Innovation and Development	R&D & Innovation Management System 研發投入 R&D Investment 創新成果 Innovation Achievements 知識產權保護 IP Protection	科技創新研發 Research and Development in Technological Innovation
供應鏈安全與管理 Supply Chain Safety and Management	供應商管理 Supplier Management 供應鏈環節管理 Supply Chain Process Management	 供應商選擇與管理 Supplier Selection & Management 供應商數量及分佈 Supplier Base Demographics 供應鏈管理政策及措施 Supply Chain Management Policies 供應鏈安全保障與應急預案 Supply Chain Security & Emergency Plans 重大風險與影響(供應鏈) Material Risks in Supply Chain 	精進供應鏈管理 Enhancing Supply Chain Management

	披露內容 Disclosure		相關章節/備註 Related Chapters/ Remarks
	繳納税費情況 Tax Payment Status	繳納税費情況 Tax Payment Status	2024 年度可持續發展亮點 Sustainable Development Highlights for 2024
	社區共建 Community Co-construction	參與當地社區建設的政策措施 Community Development Policies 對當地社區的貢獻與貢獻 Local Community	
	社會公益活動	Contributions 參與社會公益活動的政策措施 Public Welfare Investments & Outcomes 參與社會公益活動的投入及 成效	共築美好社會 Building a Better Society
	Social Public Welfare Activities	NXX Input and Effectiveness of Public Welfare Activities Participated 無障礙環境建設 Barrier-free Environment	
社會貢獻 Social Contribution		Development	2024年度專題 2024 Key Themes 科技創新研發
		產業轉型 Industrial Transformation	Research and Development in Technological Innovation 市場開拓與合作 Market Development and
	國家戰略回應 National Strategy Response	鄉村振興與區域協同發展 Rural Revitalization & Regional Synergistic Development	Cooperation 共築美好社會 Building a Better Society
		一帶一路及海外履責 Belt & Road and Overseas Responsibility	2024年度專題 2024 Key Themes 市場開拓與合作 Market Development and Cooperation
		行業特色及其他社會責任履 行情況 Industry Characteristics & Other Social Responsibility Fulfillment	共築美好社會 Building a Better Society

相關音節 / 借註

			相關章節/備註
	披露內容		Related Chapters/
	Disclosure		Remarks
治理範疇指標			
Governance			
Category			
Indicators			
一級指標	二級指標	三級指標	
Level 1 Indicators	Level 2 Indicators	Level 3 Indicators	
		治理策略制定	參見本年度年報
		Governance Strategy	Refer to the Annual Report of
	治理策略及流程	Formulation	This Year
	Governance Strategy and	治理策略批准及審核流程	集團治理制度搭建
	Processes	Governance Strategy	Group Governance System
		Approval & Review Process	Setup
		黨建引領	
		Party Building & Guidance	
		董事會、監事會和管理層組	參見本年度年報
		織與職能	Refer to the Annual Report of
		Organisation and Functions	This Year
		of the Board of Directors,	集團合規經營
治理策略與		Board of Supervisors, and	Group Compliance
組織架構	組織構成及職能	Management	Operations
Governance	Organisational Composition	董事會、監事會和管理層的	董事會管理及運作
Strategy and	and Functions	任命程序及構成	Board Management and
Organisational		Appointment Procedures	Operations
Structure		and Composition of the	
		Board of Directors, Board	
		of Supervisors, and	
		Management 苯車盒及動車的菇副計劃	<u><u></u></u> <u></u>
		董事會及監事的薪酬計劃 Remuneration Plan for	參見本年度年報 Pefer to the Appuel Pepert of
			Refer to the Annual Report of This Year
		Directors and Supervisors 董事會薪酬透明度	
	薪酬管理	里爭買新剛迈明反 Transparency of Board	
	Remuneration Management	Remuneration	
		管理層薪酬合理性	
		百年间和前日年日 Reasonableness of	
		Management Remuneration	

	披露內容 Disclosure		相關章節/備註 Related Chapters/ Remarks
規範治理 Standardised Governance	廉潔建設 Integrity Construction 公平競爭	 廉潔建設制度規範 Integrity Construction Norms 廉潔建設措施成效 Effectiveness of Integrity Construction Measures 公平競爭制度規範 Fair Competition Norms 	關注清廉經營 Focus on Integrity in Operations 集團合規經營
	Fair Competition	公平競爭措施成效 Effectiveness of Fair Competition Measures	Group Compliance Operations
	投資者關係管理 Investor Relations	投資者關係管理戰略 Investor Relations Management Strategy 投資者溝通 Investor Communication	
	Management	投資者關係管理部門建設 Development of Investor Relations Management Department	參見本年度年報 Refer to the Annual Report of This Year
投資者關係管理與 股東權益 Investor Relations Management		股東 (大會) 情況 Shareholders' Meeting Status 股東溝通情況	投資者關係管理 Investor Relations Management
and Shareholder Rights	股東權益 Shareholder Rights	Shareholder Communication Status 股東知情權與參與決定權 Shareholders' Right to Know	
		and Participate in Decision- making 徵信情況 Cradit Statua	焱目 木在 安在 起
	債權人權益 Creditor Rights	Credit Status 債券市場履約情況 Performance in the Bond Market	參見本年度年報 Refer to the Annual Report of This Year

			相關章節/備註
	披露內容		Related Chapters/
信息披露透明度 Information Disclosure Transparency	Disclosure 信息披露制度 Information Disclosure System 信息披露質量 Information Disclosure Quality	財務信息披露 Financial Information Disclosure 非財務信息披露 Non-Financial Information Disclosure 所有披露信息定期監督、審 計和評估 Regular Supervision, Audit, and Evaluation of All Disclosed Information	Remarks 參見本年度年報 Refer to the Annual Report of This Year 參見本年度ESG報告 Refer to the ESG Report of This Year 參見本年度年報 Refer to the Annual Report of This Year 集團合規經營 Group Compliance Operations
合規經營與 風險管理 Compliance Operation and	合規經營 Compliance Operation	合規經營制度 Compliance Operation System 合規體係建設情況 Status of Compliance System Construction 合規審查具體流程 Specific Processes of Compliance Review 風險識別與預警 Bisk Identification and Farly	參見本年度年報 Refer to the Annual Report of This Year 集團合規經營 Group Compliance Operations 參見本年度年報
Risk Management	風險管理 Risk Management	Risk Identification and Early Warning 風險控制與追蹤 Risk Control and Tracking 風險報告與管理 Risk Reporting and Management	Refer to the Annual Report of This Year 集團治理制度搭建 Group Governance System Setup 集團合規經營 Group Compliance Operations

