<u>《医药制造业》</u>

碳期放信息披露观察报告



Abstract

On July 6, 2021, the official website of the Department of Ecology and Environment of Inner Mongolia Autonomous Region notified "the case of false carbon emission report of Inner Mongolia Erdos High-Tech Materials Co. According to the report, the data in the 2019 greenhouse gas emission report submitted by Inner Mongolia Ordos High-Tech Materials Co., Ltd (self-provided power plant) was falsified; the Department of Ecology and Environment of Inner Mongolia Autonomous Region issued a decision to order correction of environmental violations to the enterprise, and the enterprise was ordered to rectify within a period of time.



Figure 1 Inner Mongolia Ordos High-Tech Materials Co., Ltd. false carbon emission report case

In order to crack down on enterprises' carbon emission data falsification, strengthen supervision and management of carbon emission report quality, and guarantee the smooth and healthy operation of the national carbon market, from October to December 2021, the Ministry of Ecology and Environment organized 31 working groups to carry out special supervision and support work on carbon emission report quality, focusing on key aspects such as data verification and report preparation, and in-depth supervision and inspection of

enterprise sites. Since 2022, the Ministry of Ecology and Environment and the Carbon Summit Carbon Neutral Work Leading Group Office have notified several cases of carbon emission report data falsification and other typical problems, which have attracted widespread attention nationwide.

In the process of green and low-carbon transformation and development of the whole society, the pharmaceutical industry, especially the pharmaceutical industry, has a large number of varieties, rapid renewal, high consumption of raw and auxiliary materials, and large emissions of "three wastes". According to the report of ARUP and HCWH 2019, the total global emissions of pharmaceutical companies are about 520 million tons of CO_{2e}, which exceeds the 464 million tons of CO_{2e} generated by the automotive industry in the same year, making the task of carbon emission reduction very arduous. China's biopharmaceutical industry is developing strongly, and has formed three key regions of Bohai Rim, Yangtze River Delta and Pearl River Delta and the layout of the biopharmaceutical industry cluster, led by Shanghai and mainly composed of Jiangsu and Zhejiang, is the region with the most multinational pharmaceutical enterprises, the strongest R&D and transformation power, and the highest growth value and activity in China.



Figure 2 Biomedical industry layout and characteristics (Photo source network)

In this report, Lvse Jiangnan Public Environmental Concerned Center (hereinafter referred to as "Lvse Jiangnan") focuses on the Yangtze River Delta region and selects pharmaceutical manufacturing companies listed in the list of key emission units published by the environmental protection department as the target of the study, and analyzes the current situation of carbon emission information disclosure in their 2022 annual environmental reports, hoping to find good practice cases of implementing the double carbon target and propose development suggestions for the problems in disclosure, so as to improve the level of carbon emission information disclosure in the Yangtze River Delta region in the future and promote the sustainable and green development of the industry.

Carbon emission disclosure requirements for enterprises involved in heavy emissions

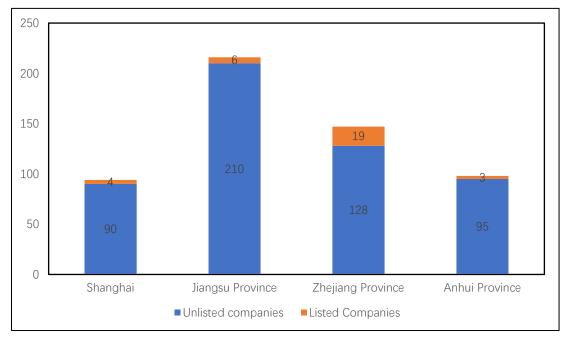
In December 2020, the Ministry of Ecology and Environment announced the Measures for the Administration of Carbon Emission Trading, which requires key emission units to control greenhouse gas emissions, report carbon emission data, clear carbon emission allowances, disclose information on trading and related activities, and accept supervision and management by the competent ecological and environmental authorities.

In October 2021, the State Council issued the Action Plan for Carbon Peaking by 2030, which requires relevant listed companies and debt-issuing enterprises to regularly publish information on corporate carbon emissions in accordance with the requirements of environmental information disclosure in accordance with the law. Give full play to the role of industry associations and other social groups to urge enterprises to consciously fulfill their social responsibilities. In December 2021 the ecological environment department issued and implemented the "Management Measures for the Legal Disclosure of Enterprise Environmental Information" (hereinafter referred to as "Management Measures") and the "Format Guidelines for the Legal Disclosure of Enterprise Environmental Information" (hereinafter referred to as "Format Guidelines"), which clarify the requirements for the subject, content and time limit of environmental information disclosure.

The "Management Measures" require that "enterprises disclosing environmental information in accordance with the law" shall disclose the environmental information from January 1 to December 31 of the previous year through the enterprise environmental information disclosure system before March 15 each year. The "Format Guidelines" further refine the content of the legal disclosure of environmental information, and standardize the format and report preparation requirements for the legal disclosure of environmental information. In response to the hot issue of carbon emission trading market, Article 19 of the Format Guidelines mentions that "key greenhouse gas emitters included in the management of carbon emission trading market allowances shall disclose information related to carbon emissions (a) actual annual carbon emissions and actual emissions of the previous year; (b) the status of allowance liquidation; (c) the status of greenhouse gas emission accounting and reporting according to the standards or technical specifications. or technical specifications, disclosure of emission facilities, accounting methods and other information". The Administrative Measures and the Formal Guidelines have the attribute of mandatory disclosure, and those who fail to disclose truthfully, timely or without disclosure will be subject to different degrees of penalties.

Research Subjects

Lvse Jiangnan according to Jiangsu Province, Zhejiang Province and Shanghai Environmental Protection Department official website published in 2022 key emissions unit list; Anhui Province enterprise environmental information disclosure system published by the list of enterprises; the final selection of 555 pharmaceutical manufacturing enterprises as the focus of this report research object. The distribution and percentage of enterprises are shown in Figures 3 and 4.



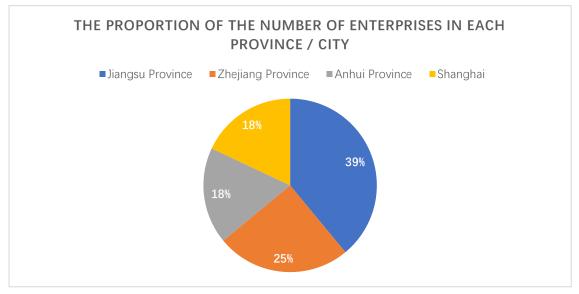


Figure 3 Distribution of key emission units (pharmaceutical manufacturing) in the Yangtze River Delta region

Figure 4 The proportion of key emission units (pharmaceutical manufacturing) in the Yangtze River Delta region by the number of enterprises in each province/city

In accordance with the requirements of the Administrative Measures and the Format Guidelines, we evaluate the disclosure of carbon emission information of enterprises in terms of whether they are included in the carbon emission trading market, whether they disclose emission facilities, accounting methods and other dimensions, and the overall situation is shown below.

省/市	纳入市场 但未披露	纳入市场 且披露	未纳入市场 但披露	未纳入市场 且未披露	合计
江苏省	2	0	8	206	216
浙江省	1	1	46	99	147
安徽省	0	0	0	98	98
上海市	0	0	4	90	94
合计	3	1	58	493	555

Figure 5 Overall Disclosure of Carbon Emission Information of Key Emission Units (Pharmaceutical Manufacturing Industry) in Yangtze River Delta Region

In addition, in order to compare and measure more comprehensively the performance of listed companies in terms of carbon emission information disclosure, Lvse Jiangnan also reviewed the publicly disclosed annual reports, ESG reports/sustainability reports and other regular reports of listed companies, information released through public channels such as official websites and official information platforms of companies.

Status of carbon emission disclosure of pharmaceutical companies involved in heavy emissions

1. 90% of pharmaceutical companies are not active enough to disclose carbon emission information

According to Figure 5, there are 493 key emission units (pharmaceutical manufacturing industry) in the Yangtze River Delta region that are not included in the carbon emission trading market and have not disclosed carbon emission information, accounting for about 90% of all study subjects.

In addition, when Lvse Jiangnan searched the environmental information disclosure system of Anhui enterprises according to the law, he found that, excluding one enterprise that had not filled in the report for the time being, the remaining 97 enterprises did not have the sub-category of carbon emission information in their annual reports. Therefore, Lvse Jiangnan called the Anhui Provincial Department of Ecology and Environment to inquire about the matter, the reply was "According to the requirements of the Format Guidelines, only enterprises that are included in the carbon emission trading market need to disclose carbon emission information, and enterprises will fill in their own reports according to whether they are included, at present, the main industry included in the carbon emission trading market is the power generation industry, and other industries will carry out related work one after another. Thank you for your attention and support to the government's environmental protection cause; if you have any questions, please feel free to correct me."

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安徽禾宸化学科技有限公司				
统一社会信用代码: 91340323587207106N				NHH C
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Figure 6 Anhui Province enterprise environmental information disclosure system according to law pharmaceutical manufacturing industry interface

It can be seen that most pharmaceutical companies' carbon emission information disclosure is based on the legitimacy motive, i.e. to fit the government requirements; for the policy requirements outside the inevitable lack of initiative. Green Jiangnan believes that enterprises take the initiative to carry out energy saving and emission reduction work and disclose it to the authorities and the public in a transparent and open manner, which is not only required by the national policy, but also can enhance the image of the enterprises themselves, create higher economic benefits for them, and contribute to the implementation of the national "double carbon" goal while achieving good environmental performance and energy saving and emission reduction effects. In addition to achieving good environmental performance and energy saving and emission reduction results, the company will contribute to the implementation of the national "double carbon" target and achieve synergy in reducing pollution and carbon emissions.

2. 30 pharmaceutical companies should be disclosed according to the provisions of the non-disclosure

Lvse Jiangnan combing enterprise information found that 30 pharmaceutical companies have violated the provisions of the "Management Measures" and "Format Guidelines".

Jiangsu Junruo Pharmaceutical Co., Ltd, Qidong Dongyue Pharmaceutical Co., Ltd and Zhejiang Haisheng Pharmaceutical Co. No data was uploaded.

1 江苏君若药业有限公司				*
ふ 依法披露	企业基本信息			
年度报告封面及康页	企业名称	江苏君若药业有限公司	许可证编号	
专业名词及术语解释 关键环境信息提要	统一社会信用代码	91321311MA1WLWPY7P	法定代表人	张宝国
大城环境信息提受	环程负责人	弦频光	环保负责人联系电话	187****5985
企业基本信息	解行政区	江苏甸	市行政区	撤还市
生产工艺和产品信息	区县行政区	密療区	街県行政区	·唐迁生态化工科技产业因
企业环境管理信息	注册地址	江苏庙迁生态化工科技产业园场子路		
企业生态环境行政许可	生产地址	江苏南迁生态化工科技产业国场子路18号		
环境保护相	国民经济行业	化学药品原料药制造		
环境污染责任保险	企业性质	民間企业	发展类型	
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Figure 7 Jiangsu Junruo Pharmaceutical Co., Ltd. 2022 Annual Report

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第三方協調机約情況 工业間体度物	实施摄制性清洁生产 审核的原因			
范险废物	实施情况			
暖声排放情况	评估勾验收结果			
施工场尘。装卸物料污染防治情况 相写许可证执行报告	生态环境应急情况		生态环境应急信息	
群放情况	应急预案名称		应急预重备案编号	<u>u</u>
制性清洁生产审核信息	应急预案备案机关		应急资源名称、储备 数量等	

Figure 8 Jiangsu Junruo Pharmaceutical Co., Ltd. 2022 Annual Report

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galzmans	10月11日	1258	市行商区	##5
企业环境繁硬信息	医鼻行数区	洞怀市	###F##28	
企业生活和地行政计可	12.6945.12	REMARKER		
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Figure 9 Qidong Dongyue Pharmaceutical Co., Ltd. 2022 Annual Report

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HINDERN	TUR-287 Areas	建化建设力操造、地区各级门会员人和技术人员进行了工艺技术研究、市场组织和设备适型、综合分析现有设备 (该和10性情味谱) 政治方案"为本次演活生产实施的量点方案、予以实施、2022.11.30世际生活环境局和信乐/	5资金很入、实施兼度及 工业均衡率比增时和公司	加重新设计工艺等问题,同时还做请有关与家庄行了综合可行任论证,最终确定方配?"生产车间发代此思用 可进行他收车端,检收意见为:一,然后东马的业有限公司十分重视库否生产来极工作,成立了清洁生产很马小
#16C2838.信息 + 要称可口		每級小型、制設度省主产等級计划、使用総本规范开展承收工作、开發托具有研想的第三方省历纪和面景认用环 苏曼表出产者和的有关组合和要求执行、家规程序和展示可量和压制行、三本和原含工产者和其他的考试在	部長木町県公司市行通信 内室16小、加中子(約)	这个亲戚者语,取得了极为动物的效果。二者语形式出来出现不能在不有限分的亲戚的亲戚没有的现象。 最大爱认为,也很是大爱让人,也是人说会认识下来,为爱之知道,即因此又发出的,则下于我地说这一下的助
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234,5112	12252668	免疫环境影响血急贸易	0.00522200	329681-2023-10-44
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ATR: MONOFCOMESING			此居地	
用行件可证则行相当	来社主志环境中什ら 将	minimum initiaeee without	20.2.010	2622-06-23
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Figure 10 Qidong Dongyue Pharmaceutical Co., Ltd. 2022 Annual Report

合首页	日企业填报	回披露名单	目使用帮助				2023-06-1	3 星期二 1
(A)	统一社会信用代码 法定代表人:叶山 企业性质: 民营企 行业: 化学药品原	业					(R) 供監区 西湖	● 杭州市
		以下信息	由该企业提供,企	TY1461K1210-203	民来任, 口次任火;	2		
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Figure 11 Zhejiang Haisheng Pharmaceutical Co., Ltd. 2022 Annual Report

	新江省生え ystem on Corporate	环境厅-:	企业环 nformation Dis	竟信息(sclosed in acc	衣法披露 ordance with the	系统 Law	王导航	유 현국
俞首页	已企业填报	回披露名单	目使用帮助	del.		2	023-06-13 星期二	13:15:01
181	法定代表人:叶山洵 企业性质:民营企业 行业:化学药品原料	91330800668334422# #					3 田立区 :	
		① 以下信息	由该企业提供,企	全业对其报送信息	的真实性、合法性负	ŧ.		
		及术语解释 企业环	境守法关键信息	企业基本信息	企业环境管理信息	企业污染物产生、治	理与排放信息	强 >
	综合废水处理设施 水污染物防治设施			负责运营、维护	的第三方机构名称:浙江	[巨化清安检测科技有限]	23司	
	预处理+厂区度气集中处理 大气污染物防治设施	装置		负责运营、维护	的第三方机构名称:浙江	[中一检测研究院股份有]	夏 公司	
企业污染防	治设施明细信息							
碳排放情况								_
不涉及理由	: 暫无統计数据							

Figure 12 Zhejiang Haisheng Pharmaceutical Co., Ltd. 2022 Annual Report

In addition, including Zhejiang Donghui Pharmaceutical Co., Ltd., Shanghai Yishengyuan Pharmaceutical Co., Ltd. and Jiangsu Madsen Pharmaceutical Co., Ltd. 27 pharmaceutical companies belonging to the key emission units, in accordance with the provisions of the "Management Measures" before March 15, through the enterprise environmental information disclosure system in accordance with the law to publicly disclose the annual environmental information in 2022, but in the provinces and municipalities on the filling system are showing "no data".

	浙江省生态环境厅-企业环境信息依法披露系统 System on Corporate Environmental Information Disclosed in accordance with the Law									至身航 名登	
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浙江东晖药业	有限公司			Q							
	杭州市	宁波市	温州市	嘉兴市	湖州市	区域查询 绍兴市	金华市	衢州市	舟山市	台州市	丽水市

Figure 13 Search of Zhejiang Donghui Pharmaceutical Co.

The Measures also impose penalties on enterprises that fail to disclose annual environmental information in a timely manner, namely, Article 28, which stipulates that "if environmental information is not disclosed, the competent department of ecology and environment at or above the municipal level of the district shall order rectification, inform criticism, and may impose a fine of not less than 10,000 yuan but not more than 100,000 yuan"; and Article 29, which stipulates that "If the disclosure of environmental information exceeds the prescribed time limit or if the environmental information is not uploaded to the enterprise environmental information disclosure system in accordance with the law, the competent department of ecology and environment at or above the municipal level of the district shall order correction, inform and criticize, and may impose a fine of not more than 50,000 yuan."

It can be seen that the local ecological and environmental departments have the right to punish the enterprises, whether the annual report disclosure is incomplete or not disclosed in time. We hope that the above-mentioned companies can disclose or explain by preparing interim reports as soon as possible to enhance their environmental performance to avoid environmental penalties and damage to their corporate image.

3. Showing corporate responsibility, 14 companies actively make carbon disclosure

Unlike most enterprises that follow the rules and regulations and only fill in the information required by the relevant regulations, 14 enterprises such as Shen Long Pharmaceutical (Changshu) Co, Shanghai He Quan Pharmaceutical Co, Zhejiang Aoxiang Pharmaceutical Co, consciously fulfill their social responsibility, actively respond to the market and policies, report carbon emission data and clear carbon emission allowances in detail in the 2022 annual report, and actively accept the ecological environment Ltd. and other 14

enterprises consciously fulfill their social responsibility, actively respond to the market and policies, report carbon emission data and pay carbon emission allowances in their 2022 annual reports, and actively accept the supervision and management of the ecological and environmental authorities. It is worth mentioning that these 14 enterprises, except for Jinhua Kang'anbei Biopharmaceutical Co.

Table 1 List of 14 enterprises with excellent performance in carbon emission

Company Name	Company Name
Shenlong Pharmaceutical (Changshu)	Shanghai Hequan Pharmaceutical
Co.	Co.
Zhejiang Aoxiang Pharmaceutical Co.	Zhejiang Oceanpower Chemicals Co.
Wenzhou Zhongke New Energy	Zhejiang Prodebon Pharmaceutical
Technology Co.	Co.
Zhejiang Jinhua Kangenbei	Zhejiang Jiuzhou Pharmaceutical
Biopharmaceutical Co.	Company Limited Jiaojiang Waisha
	Branch
Zhejiang Tiantai Pharmaceutical Co.	Zhejiang Staley Pharmaceutical Co.
Yikolai (Taizhou) Pharmaceutical Co.	Zhejiang Hongyuan Pharmaceutical
	Co.
Wanbangde Pharmaceutical Group	Zhejiang Behede Pharmaceutical Co.
Co.	

information disclosure

	上海合全药业股份有限公司
	统一社会信用代码: 91310000746539459M
	法症代表人:時民章 (MINZHANG CHEN)
	企业性质:合资企业
	行业:化学药品原料药制造
	注册地址:上海市金山区月工路9号
	以下信息由该企业提供,企业对其报送信息的真实性、合法性负责
年度报告	ap 技会課 (0) 年份 2022 〇
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年度报告封面	和及處页 专业名词及术语解释 关键环境信息提要 企业基本信息 企业环境管理信息 企业污染物产生、治理与排放信息 (1871
碳排放情况	
IN HEAD AND	

Figure 14 Shanghai Hequan Pharmaceutical Co., Ltd. 2022 Annual Report Carbon Emissions

Lvse Jiangnan expresses its affirmation of the above-mentioned enterprises' behavior of showing their commitment, taking the initiative to assume social responsibility and actively embracing the national policy. The disclosure of carbon emission information by enterprises, on the one hand, conveys to the public the signal that the enterprises themselves actively respond to the national policy and implement the "double carbon" target, which is conducive to enhancing the corporate image and gaining more investment opportunities; on the other hand, it is also a way for enterprises to check themselves and help them improve their awareness and ability of climate risk management. It is also a way for other enterprises and industries to improve the science, comprehensiveness and initiative of carbon emission information disclosure, which plays a good demonstration role.

Lvse Jiangnan Promotion

Lvse Jiangnan sent a letter to 41 pharmaceutical companies on April 28, 2023,

aiming at friendly communication and warm reminder on the disclosure of carbon emission information in the 2022 annual report. Except for WTO Tianji Pharmaceutical (Jiangsu) Co., Ltd. and Yuxing Medical Materials (Lu'an) Co., Ltd. which refused to receive the letter, and Yancheng Xin'Anzhou Pharmaceutical Co., Ltd. which returned the letter due to the unknown relocation to a new location, the remaining 38 companies have shown that the letter has been signed.

Up to now, Lvse Jiangnan a total of nine companies have communicated and exchange, the remaining 29 pharmaceutical companies been called several times, but have not received an effective response. Enterprise response is as follows:

(i) Data not updated in a timely manner

Although Wu Gan Pharmaceutical (Suzhou) Co., Ltd. is not included in the carbon emissions trading market, but after receiving Lvse Jiangnan's letter, it took the initiative to contact Lvse Jiangnan and expressed its gratitude for Lvse Jiangnan's tips; at the same time, it said that because the company's personnel just contacted the field, the data update was not timely resulting in missing data, and now the data has been re-uploaded, and Lvse Jiangnan is welcome to monitor and make suggestions.

After verification, the enterprise has updated the carbon annual emission data of 2021 and 2022 on the enterprise environmental information disclosure system of Jiangsu Province according to law.

吴赣药业 (苏州) 有限公司						
依法披露 企业污染物产生、治理与排放	施工扬尘污染防治主要	製措施		装卸物料污染防治主要	要措施	
污染防治设施						
排污口总体信息	排污许可证执行报告	i				
主要排污口	报告种类		发布网址	应编制公开次数		实际编制公开次数
无组织排放监测点位	B	报	http://permit.mee.gov.cn/cas/login?servic		12	
自行监测总体情况						
第三方监测机构情况	3	报	http://permit.mee.gov.cn/cas/login?servic	4		
工业固体废物	年	报	http://permit.mee.gov.cn/cas/login?servic	1		
危险废物	碳排放情况					1
噪声排放情况						
施工扬尘、装卸物料污染防治情况	本年度实际排放量 (千克)	10845000		上年度实际排放量 (千克)	19443000	
排污许可证执行报告	副統括統合成情況			温辛气体排放检算方		
碳排放情况				法		
强制性清洁生产审核信息	排放设施信息					
生态环境应急信息	强制性清洁生产审核	結息				
生态环境应急情况						
重污染天气应急响应情况	头她强制在海道生产 审核的原因	战略。通过现场调查 理、废弃物的处理处	续发展的动力,是在生产过程中实施从原材料到产 分析,进行物料平衡和全过程的审核,发现从原材 置等一系列环节的问题,并提出相关的改进对策,	料的选购、投放、能源的	市约、产品工艺、过程	控制、技术路线、设备操作与维护、
生态环境违法信息		境效益。				
行政处罚信息	实施情况	正常运行				
司法判决信息	评估与验收结果	符合相关条件,验收	合格			

Figure 15 Wu Gan Pharmaceutical (Suzhou) Co., Ltd. 2022 Annual Report Update

12日 Kitk (35州) 4日 R公 年度报告	其他关键环境信息				
12 环保脸谱	其他关键环境信息				
	企业基本信息				
脸谱评价	企业名称	吴赣药业 (苏州) 有限	公司	许可证编号	91320509MA1MT1MD63001P
🖄 依法披露	统一社会信用代码	91320509MA1MT1MD6	3	法定代表人	线膜
年度报告封面及扉页	省行政区	江苏雪		市行政区	苏州市
专业名词及术语解释 关键环境信息提要	区县行政区	RIK		街道行政区	吴江开发区
大艇环境信息建要	注册地址	苏州市吴江区同里镇屯	村东关路159号		
生产工艺和产品信息	生产地址	苏州市吴江区同里镇屯村东关路159号			
企业环境管理信息	国民经济行业	化学药品原料药制造			
环境保护税	企业性质	36(1)		没债类型	
环境污染责任保险 环保信用评价情况	是否属于重点排污单 位			重点排污单位类型	水重点排污单位。大气重点排污单位
全业污染物产生、治理与 污染物治设施 排污口总体信息 主要排污口	是否属于实施强制性 清洁生产审核企业	2		是否属于纳入碳排放 权交易市场配额管理 的温室气体重点排放 单位	ā
	是否属于上市公司	2			
无组织排放监测点位	生产工艺和产品信息				

Figure 16 Wu Gan Pharmaceutical (Suzhou) Co., Ltd. 2022 Annual Report Update

(ii) unfamiliar with regulatory requirements

Jiangsu Madsen Pharmaceutical Co., Ltd. in the receipt of the letter, the first time to reply to the green Jiangnan. Said "is not clear about the relevant requirements, but also do not know how to fill in the report, commitment to other companies to understand the situation after disclosure", Lvse Jiangnan continue to pay attention to information updates.

(iii) The government does not require disclosure

Zhejiang Chengyi Pharmaceutical Co., Ltd, Zhejiang Xianju Pharmaceutical Co., Ltd and Zhejiang Haisheng Pharmaceutical Co., Ltd all said that "local government departments do not require carbon disclosure", and when asked about the reasons for not requiring it, all three companies said they were not sure.

Zhejiang Xianju Pharmaceutical Co., Ltd. has a supplementary explanation of carbon disclosure, saying that "according to the requirements of the competent authorities, carbon emission information is disclosed on the 'industrial energy saving and green development' platform, but at present, the carbon emission data uploaded is still 21 years, and the filling of 22 years' data needs to wait for The data for 22 years will have to wait for the notification of the competent authorities".

(iv) Other cases

Ltd., Wuxi Yishu Pharmaceutical Co., Ltd., Shanghai Blue Garden Bioengineering Co., Ltd. and Beda Pharmaceutical Co., Ltd. 4 pharmaceutical companies replied similarly: they said they were not sure which department/who was responsible for the annual environmental reporting and needed to reply after verification.

Jiangsu Zhengda Fenghai Pharmaceutical Co., Ltd. said: "We have not received the relevant letters, if you have questions send an email to the company mailbox, the follow-up will be replied.

Qidong Dongyue Pharmaceutical Co., Ltd. staff on the phone, said it is not clear, Green South has sent an electronic letter. Green South repeatedly called Jiangsu Junruo Pharmaceutical Co., Ltd., unfortunately, the phone has not been connected, Green South also sent electronic letters to the company.

Conclusion and Recommendations

In July 2021, the national carbon emissions trading market was officially opened at the Shanghai Environmental Energy Exchange. This is the world's largest carbon emissions trading market and a key step towards achieving China's goal of "carbon neutrality". According to the Ministry of Ecology and Environment, the first batch of 2,162 key emission units in the power generation industry were included in the national carbon market, covering about 4.5 billion tons of carbon dioxide emissions. According to the "Hubei Province Carbon Emission Allowance Allocation Plan for 2021" released in November 2022, the pharmaceutical manufacturing industry has been included in the Hubei carbon emission trading market, and other regions, including the pharmaceutical manufacturing industry in the Yangtze River Delta, will soon be included in the carbon emission trading system.

In this report, through the observation of the disclosure of carbon emission information of pharmaceutical manufacturing companies in the Yangtze River Delta region listed in the list of key emission units published by environmental protection departments, we found that the overall disclosure ratio and level of pharmaceutical manufacturing industry is currently at a low level, and the initiative needs to be further strengthened. Companies need to be conscious of their responsibilities, strengthen their carbon emission management and disclosure efforts, and help implement the "double carbon goal" as much as possible. However, we should also see that there are still problems caused by different information disclosure standards and inconsistent requirements under different calibers. Multiple sets of standards make market players confused, and will also affect the actual effect of carbon emission reduction.

To this end, Lvse Jiangnan recommends that:

1. Companies pay attention to their own environmental information disclosure and take the initiative to assume social responsibility

As an important market player, carbon disclosure is of great significance for enterprises to achieve the goal of "double carbon". We should make efforts to make carbon disclosure comprehensive, truthful, timely and consistent, actively fulfill our social responsibility and promote our low-carbon transformation.

The establishment of a professional team is a prerequisite for enterprises to carry out carbon emission information management work, and to build up a good capacity reserve and improve the professionalism and execution of the team. Enterprises should also conduct self-examination and reasonable assessment, set reliable and realistic long-term and short-term targets for "double carbon", and evaluate their own carbon emission performance on time, so as to fill in the gaps. In addition, they can learn from the excellent experience of leading companies, and continuously improve their carbon disclosure level, so as to embrace compliance while going beyond it.

2. Based on the fundamental, learn from experience, and constantly optimize laws and regulations standards

The Administrative Measures and the Format Guidelines have been officially released, which means that carbon emission information disclosure has gradually entered the era of mandatory disclosure. There are also penalties in the Administrative Measures for non-compliance with the disclosure requirements, but the fines are not high and there is no corresponding incentive mechanism. In contrast, the cost of establishing a comprehensive GHG emission accounting, monitoring and disclosure system is much higher than the upper limit of fines, and those enterprises that choose to disclose carbon emission information do not receive additional incentives. Perhaps because of

this, in the absence of an effective incentive and restraint mechanism, most enterprises lack the incentive to implement it.

Therefore, Lvse Jiangnan suggests that the regulatory authorities should continue to improve the rules of environmental information disclosure management, insist on the combination of China's actual situation and international best practices, study and optimize the information disclosure requirements on social responsibility and corporate governance in due course, and further improve the relevance and effectiveness of information disclosure.

3. Government departments play a regulatory function to urge companies to disclose as much as they should

According to the observation, three of the 555 pharmaceutical companies included in the carbon emission trading market that are the focus of this report have not disclosed carbon emission-related information in the legal disclosure system of enterprise environmental information in various provinces and cities, and 27 of them have not yet disclosed their annual environmental information, which is obviously contrary to the relevant regulatory requirements.

Therefore, Lvse Jiangnan suggests that government departments should give full play to their supervisory functions, supervise the disclosure content of enterprises in accordance with the relevant requirements, and punish and correct those enterprises that do not comply with the regulations, so as to ensure that enterprises should disclose as much as possible.

4. Enterprises should respond to social concerns in a timely manner

In this report, Lvse Jiangnan sent letters to 41 companies regarding the lack of carbon disclosure, but only 9 companies responded as of the release of the

report. China's laws clearly stipulate that citizens, legal persons and other organizations have the right to obtain environmental information, participate in and supervise ecological environmental protection in accordance with the law. Enterprises should proactively respond to social concerns and strengthen communication and exchange to fulfill their social responsibilities.